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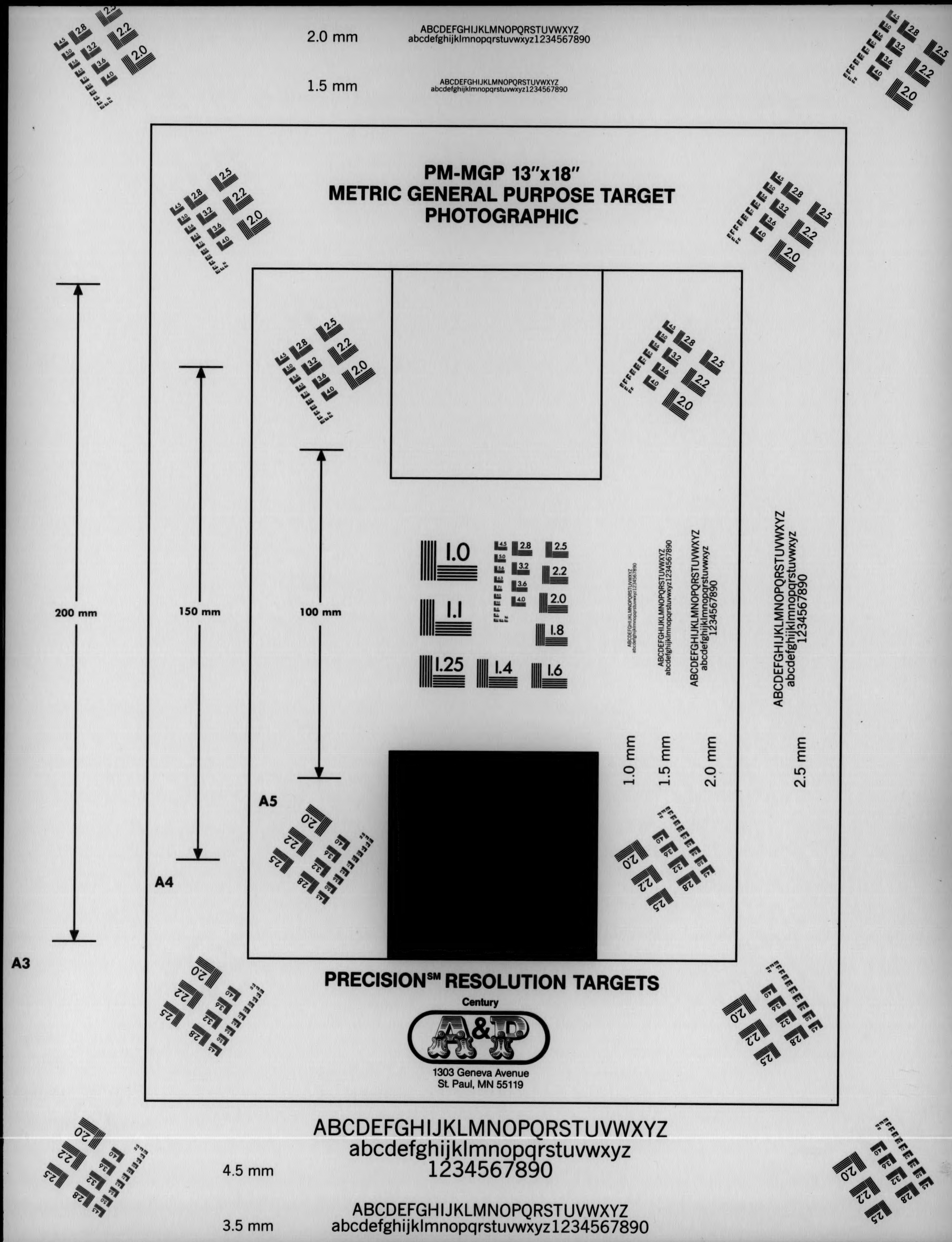
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THE AUTOMOTIVE MARKET IN CHILE

U. S. DEPARTMENT OF COMMERCE
BUREAU OF FOREIGN AND DOMESTIC COMMERCE

U. S. DEPARTMENT OF COMMERCE
R. P. LAMONT, Secretary
BUREAU OF FOREIGN AND DOMESTIC COMMERCE
WILLIAM L. COOPER, Director

Trade Promotion Series No. 107

THE AUTOMOTIVE MARKET IN CHILE

By
HOWARD H. TEWKSBURY
American Trade Commissioner

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FOREWORD

Automobile registrations in Chile on January 1, 1930, numbered 33,000, including 22,650 passenger cars, 8,675 trucks, and 1,675 busses. Of these, American makes accounted for approximately 95 per cent. Steady growth in United States exports of automobiles to Chile has occurred during the last few years, culminating with an increase of 50 per cent during 1929, when such exports totaled nearly 7,900 units, giving Chile fourth place in South America as a market for United States automotive products.

The Government of Chile has long realized the importance of highways in economic development; as early as 1920 provision was made for road construction and maintenance. In 1928 provision was made for main highways, on which work has been commenced and will probably be completed before the end of 1930, giving Chile a complete system of first-class highways connecting the principal centers of the country.

The question of distribution and representation in Chile has been a problem for the American automobile manufacturer. Howard H. Tewksbury, former automotive trade commissioner to South America, has surveyed the situation fully and developed a plan of territorial division which will be of material assistance to automotive exporters. This is the fifth and last report of Mr. Tewksbury on South American countries.

The foreign offices of the Bureau of Foreign and Domestic Commerce maintain close contact with automotive markets in their respective territories and are in a position to help the American exporter solve the many problems which arise. Interested firms are urged to keep in touch with the automotive division of the bureau for the latest developments; specific inquiries for more detailed information than can be included in the pamphlets of this series will receive careful attention.

William L. Cooper, *Director*,
Bureau of Foreign and Domestic Commerce.

September, 1930.

THE AUTOMOTIVE MARKET IN CHILE

Two years ago Chile was considered an automotive market of only minor importance in South America. In 1929 it ranked fourth among all South American markets in number of passenger cars and trucks imported from the United States. The automotive market in Chile has developed rapidly during the past two years; in view of the progress being made in road building, this development will, in all likelihood, continue.

Exports of passenger cars from the United States to Chile increased more than 110 per cent in 1928; in 1929 there was a further increase of nearly 40 per cent. In the years immediately preceding 1928 exports from the United States had been maintained at about 1,600 units.

The great development in the truck field commenced a year after that in the passenger-car field. While truck exports from the United States in 1928 gained approximately 40 per cent over the two previous years, the 1929 figure showed an increase of slightly over 90 per cent. The growth in demand both for passenger cars and trucks may be expected to continue, but the greatest relative increase in sales will, it is believed, appear in the truck field. Improvement being made in the roads is having a strong influence in the elimination of the ox cart and other primitive means of transportation and the value of truck transportation is rapidly being appreciated, particularly in the agricultural sections where previously it had been but little utilized.

SOCIAL, COMMERCIAL, AND ECONOMIC FACTORS

Population and language.—Although no official census has been made in Chile since 1920, the statistical division of the Government estimated the population on June 30, 1927, at 4,164,873. The 1920 census showed that 46.6 per cent of the population was urban; the population of Santiago represented 25 per cent of the entire population of Chile. Santiago and Valparaiso are the only cities having a population in excess of 100,000; there are only 11 having a population in excess of 20,000.

The population is primarily of Spanish origin, but the native Indian element is very strong, particularly in the southern part. While there has been a fairly substantial immigration from European countries, particularly Germany, Great Britain, and France, the present annual immigration into Chile is not great.

The official language is Spanish, but English is understood by many business men in Santiago and Valparaiso. Unless a firm spe-

cifically indicates, however, that correspondence in English is understood, only Spanish should be used. Catalogues for general distribution should obviously be in Spanish.

From a geographic and economic standpoint, Chile may be divided into three zones. The northern zone is a vast desert, with no rainfall. The coastal range rises abruptly from the sea to heights of 1,000 to 3,000 feet; to the west of those mountains is a fairly even tableland which ascends gradually to the Bolivian Plateau, 12,000 feet above sea level. In the central zone the Andes reach their highest point, and the valley between the two mountain ranges widens. The northern part of the zone is generally arid, but there is a fair amount of cultivation throughout the central valley, especially in the southern part of the district. The southern zone includes the great agricultural district of Chile. The Andes gradually diminish in height to the south. The southern half of this zone is sometimes separately considered and consists of a large archipelago extending from Puerto Montt to Cape Horn. The central valley disappears entirely south of Puerto Montt.

Mineral resources.—Minerals are the principal source of wealth of Chile, almost every variety being found. The principal mineral deposits, except of copper and coal, are found only in the northern zone.

Nitrate, the most important mineral, is found in the northern part of the country; since the beds are close to the surface, the mining problem is simple. For many years the principal source of revenue of the Chilean Government has been the export tax on this product. The annual production of nitrate is 3,000,000 to 3,500,000 metric tons, practically all being exported. With the development of synthetic nitrate in Europe, an overproduction developed in Chile, with the result that in the early part of 1930 some large oficinas decreased production. The production in 1929 amounted to 3,237,593 metric tons, slightly less than the previous year, but the carry-over on January 1, 1930, amounted to approximately 300,000 metric tons, about 30 per cent, more than the previous year.

Iodine, a by-product of nitrate, is also a very important source of revenue in the north, but production is restricted by the Government and in 1929 amounted to only 1,387 metric tons.

Copper, second among the mineral products, is found in the north and central parts of the country. A large amount of American capital has been invested in Chilean copper mining, and the production is gaining annually. All the copper produced is exported in the form of bars, the bulk going to the United States. The production during 1929 amounted to 303,160 metric tons, a gain of approximately 10 per cent over 1928.

Coal of an inferior quality is found in southern Chile. The production averaged slightly less than 1,400,000 tons during the past six years; 20 to 25 per cent is exported. Iron, potash, borax, salt, lead, zinc, silver, and gold, and many other minerals exist in Chile, most of them being exploited to some extent.

Agriculture.—The prosperity of southern Chile depends largely upon agriculture. The activities in the mining districts of the country, however, play an important part even in that section, since any decrease in activities in the north seriously affects the market for agricultural products. As a large amount of these products are shipped to northern Chile, changing conditions in that section are soon felt in the agricultural districts.

The principal crop is wheat, production of which in the crop year 1928–29 amounted to 27,650,000 bushels, a slight reduction over the previous year. Barley and oats are the next most important products. Potatoes, corn, beans, peas, and lentils are all of considerable importance, and the conditions of those crops has a direct bearing on the prosperity of the various localities in which they are produced.

The production of grapes and wine is a very important industry in central and southern Chile. Most of the grapes and wine are consumed locally but there is a growing volume of exports.

With the exception of the grape crop, agriculture throughout Chile declined during the 1928–29 season. Prices for practically all products were high, however, and more than compensated for the reduction in crops.

Because of the high price paid for oats during that year, plantings of that grain increased greatly in the 1929–30 season. Early estimates of 1930 showed increases in production of 20 to 25 per cent for practically all crops except lentils. Prices were below those of the previous year, but the increases in production were expected to result in a return to the farmers equal, at least, to that of the previous year. As a whole, the agriculural situation early in 1930 was considered favorable.

Livestock.—The raising of livestock, particularly sheep, is an important industry throughout the southern half of Chile. Quantities of livestock are shipped on the hoof to the cities and settlements in the north where no forage is available. Cattle and swine are raised principally in the rich agricultural sections lying between Santiago and Puerto Montt. Every year large numbers of cattle are driven over the Andes from Argentina, and there has developed an important local industry for fattening the Argentine stock for six months or a year before shipment to northern Chile. The sheep industry is centered largely in the territory from Puerto Montt south to Magallanes, the latter being the most important section. An excellent quality of wool is produced, the bulk of which is exported. Dairy products are produced solely for home consumption. During the past few years there has been a slight increase in production of milk, cheese, and butter, but there is said to be little likelihood that production during the next few years will be increased to the point where there is an exportable surplus.

Forest products.—Large resources of lumber exist in most parts of southern Chile. The supply is sufficient to meet the needs of the entire country, but owing to the manner of exploiting the resources, northern Chile must import a fairly large portion of its lumber, many of the larger mining companies of the north preferring to purchase, even at a slightly higher cost, properly seasoned imported material rather than the home product.

Manufacturing.—Manufacturing industries are centered principally in the central zone, but there are some centers in southern Chile, such as Valdivia and the district around Concepcion, which are of growing importance industrially. Manufacturing is increas-

ing annually, but there has yet been no production of automotive products aside from the building of bodies for trucks and busses. One American manufacturer assembles automobiles in Santiago, but none are manufactured locally.

For many years Chile has had a favorable balance of trade. The following table shows the total value of the country's imports, exports, and favorable trade balance in the five years ending with 1928.

FOREIGN TRADE OF CHILE

[In pesos]

Year	Imports	Exports	Favorable balance
1924	1,089,772,299	1,817,938,707	728,166,408
1925	1,223,377,776	1,878,757,824	655,380,048
1926	1,292,673,783	1,654,538,924	361,865,141
1927	1,072,991,063	1,689,667,566	616,676,503
1928	1,200,034,220	1,964,269,106	764,235,106

Approximately 85 per cent of the total value of exports represents mineral products; nitrates alone represent nearly half, with copper accounting for nearly 25 per cent. Iodine ranks third, wool fourth; as a group, exports of agricultural products exceed in value those of livestock products.

TRANSPORTATION

Chile is well supplied with railroads, having at the close of 1927 a total mileage of 5,412. A longitudinal railroad extends from Iquique in the north to Puerto Montt in the south; numerous transverse lines connect the important coast cities with those in the interior. An international line connects Valparaiso and Santiago with Buenos Aires, and other lines connect Arica and Antofagasta with La Paz, the capital of Bolivia.

Direct steamship services connect all the principal cities on the coast north of Valparaiso with European and American ports. A number of the foreign vessels continue south as far as Talcahuano, the port of Concepcion. Regular Chilean services operate to all ports along the coast as far south as Magallanes.

Chile possesses very few natural harbors; consequently, practically all freight must be lightered. The heavy seas frequently encountered at a number of the northern ports make the transfer of freight to the lighters difficult and subject the cases to rough treatment. Care should be used, therefore, in providing strong packing for shipments of motor vehicles to Chilean ports; specific instructions received from distributors should be carefully followed.

Numerous small rivers are found in Chile, but very few are of any importance in navigation.

In 1928 the Chilean Government established its first regular airplane services. Early in 1930 regular services were operated for mail and passengers from northern Chile as far south as Puerto Montt, and at that time an extension of the services to Magallanes was being planned and experimentally tried out. It is expected that regular services will be available from one end of the country to the other in the near future. A regular air-mail service is operated by an American company from Santiago to the United States and to Buenos Aires; another American company operates a weekly passenger and mail service from Santiago to Buenos Aires.

HIGHWAY SYSTEM

The first important highway legislation in Chile, adopted in 1920, provided for special taxation for highway building, a special highway fund, and a separate division in the Government in charge of highway work. This law is still the basis of highway legislation and has resulted in steadily increasing the funds for highway work.

From 1920 to 1927 an increasing amount of road building and maintenance was undertaken by the Government; in 1928 further legislation was adopted that really put road building on a definite plan. Early in 1928 Congress passed an extraordinary budget act providing 1,595,000,000 pesos (approximately $193,570,000) to be spent over a period of five years for public works in Chile, with 95,000,000 pesos (approximately $11,530,000) for road building. The law provided for the construction of main highways throughout Chile. During 1928 and the first half of 1929 contracts were let and work was commenced on some 700 kilometers, the cost of which will amount to approximately 15,000,000 pesos. Most of the roads are to be hard surfaced, the majority of asphalt and macadam construction.

In January, 1929, another law was passed authorizing a loan of 90,000,000 pesos (about $10,900,000) for the construction and improvement of low-grade roads. Whereas the law of 1928 provided primarily for the construction of main highways throughout the country, the law of 1929 provided for the construction of country roads and feeders to the main highways. Under the latter act, about 5,700 kilometers of roads will be built at a total cost of 99,100.000 pesos (slightly over $12,000,000). The excess over the 90,000.000 pesos, provided in the law of 1929, is to be paid out of the 95,000,000 pesos authorized in the law of 1928.

In addition to the funds provided through the laws of 1928 and 1929, an additional amount of approximately 33,000,000 pesos ($4,000,000) is available annually from revenues received from the basic highway law of 1920. Between 1925 and 1928, various special appropriations were authorized by Congress for specific road projects, amounting to 44,500,000 pesos ($5,500,000). The funds now available are sufficient to enable the Government to push its definite and comprehensive road program through to completion. Within the next six or eight years the greatest part of the road program should be completed, giving Chile a complete system of first-class highways connecting the principal centers of the country, together with a system of secondary or low-grade roads, serving as feeders to the main highways and connecting the smaller towns. Popular interest in the good-roads movement is now very keen.

CONTROL OF HIGHWAY CONSTRUCTION

The central highway department has control over the construction and maintenance of roads built under appropriations of the National Government. This control extends to the determination of the work

to be done, the location of highways to be built, types of construction, methods of maintenace, and all other phases of the problem. A resident engineer is assigned to each Province to supervise the work outlined by the department. Toward the close of 1929 the various Provinces were given a greater part in determining the work to be undertaken, but they make no appropriations for road building and undertake none of the work; the central Government exercises practically exclusive jurisdiction.

Street paving is entirely within the jurisdiction of the various municipalities. Complete figures are not available showing the expenditures of the municipalities or the extent of various types of paving, but according to the budget estimates of 1929 covering 93 municipalities, a total of over 83,600,000 pesos (approximately $10,100,000) was provided for this work. No definite data are available as to the actual expenditures, but it is certain that the total did not reach the figure indicated. This was due, in some cases, to the lateness with which the awards of contracts were granted and, in some of the smaller cities, to a lack of funds for paving work. A consolidated municipal loan of $15,000,000 was made in September, 1929, from which many of the small municipalities had figured on paying for the paving work. In many cases funds were not allocated in sufficient time to allow the municipalities to award the contracts before the close of 1929. Practically all work originally provided for in 1929, together with new projects, will be completed in 1930. It is the general practice in street paving for the municipality to pay one-half the cost and for the balance to be divided among the property owners.

HIGHWAY FINANCING

The highway law of 1920 imposed a tax amounting to 2 per cent of the value of urban and rural property; it provided also that the National Government, out of its ordinary revenues, contribute a sum equal to one-half of the amount thus collected. The ordinary highway revenue is increased by various miscellaneous taxes, such as mining licenses, donations of private individuals, and specific funds provided through special appropriations, the last affecting the total funds available for highway work by as much as 15 to 30 per cent. The 2 per cent land tax, with the regular appropriation from the National Government, usually covers at least 75 per cent of the annual highway expenditures.

The cost of bridge construction and maintenance comes not from the ordinary highway fund, but from a special provision in the budget. The funds are derived from an additional levy on property, duty on gasoline, part of the taxes on vehicles, etc., these three items providing roughly 87 per cent of the total revenues for bridge construction.

EXTENT OF ROADS

Up to the middle of 1929 the official Government figures showed a total of 39,138 kilometers of roads in Chile. Approximately 550 kilometers, it was estimated, were hard-surfaced roads. The following statement shows the types existing in the country as classified by the Government:

	Kilometers
Dirt	33,116
Gravel	3,475
Sand and clay	1,997
Macadam, water-bound	490
Concrete or reinforced concrete	28
Asphalt or other bituminous surface	32
Total	39,138

Of the first three classifications, many roads are not passable the year round. In southern Chile, where the rainfall is extremely heavy during the winter months, many of the roads not having hard surfaces become absolutely impassable, and until permanent hard-surface roads can be built, or at least the low-grade roads are improved, it will be necessary to grade and recondition the roads in the spring of each year for use during the summer season, when the rainfall is relatively light.

At the close of 1929, in addition to the roads indicated above, the following roads had been authorized and were under construction: Concrete or reinforced concrete, 261 kilometers; bituminous macadam, 24 kilometers; water-bound macadam, 143 kilometers. Practically all of this work will be completed during 1930. The construction of these roads was provided from special funds. In addition, a substantial amount of work was under way on roads provided under the laws of 1928 and 1929.

DEVELOPMENT OF THE AUTOMOTIVE MARKET

While there have been rather wide fluctuations in Chilean imports of automotive products each year, the general trend from 1919 through 1927 showed a gradual increase; in 1928 the value of passenger-car imports almost trebled that of the previous year, and the value of truck imports was nearly 14 times that for 1927. Detailed figures are not available for 1929, but it is believed that substantial increases occurred in both lines.

The value of imports in 1918 reached an abnormally high point, but from that year through 1927 the total value of passenger cars and trucks imported into Chile did not exceed $1,500,000. In 1921 and 1922, years of general depression throughout South America, imports dropped even below $1,000,000 in value; in 1928 the value was approximately $4,260,000.

According to official Chilean statistics, the truck imports in no year from 1922 to 1927 exceeded $135,000, in value, and in the 10-year period preceding 1928, they amounted to an average of only slightly over 10 per cent of the value of all motor vehicles imported. In 1928, the value of truck imports amounted to nearly 30 per cent of the total imports; in 1929, it is estimated, the ratio was at least equal to that of the previous year.

The remarkable increase in imports during 1928 was due in a large measure to a reduction in the import duty during that year. The progress in road building and the generally favorable economic situation throughout the country have also had an important influence in the growth of automotive sales. With Chile's road program under way, there will be, it is believed, a continuation of the present strong demand for cars and trucks. Truck sales are expected to

show the larger relative increase during the next five years, and the biggest development in this field will undoubtedly occur in southern Chile, where less progress has been made and where the ox cart is still a very common means of transportation.

General business conditions were very good throughout Chile during 1928 and 1929; the market for automobiles of all price classifications was exceptionally good up to the closing months of 1929. During December and the first two months of 1930 some dealers reported a slowing up of sales, particularly in passenger-car lines, and there was a slight feeling of uncertainty as to what 1930 would bring the trade. A number of dealers had abnormally large stocks of both passenger cars and trucks, especially the former, at the opening of the year, and these caused some concern. The general economic situation at the first of the year was satisfactory, though it was sometimes felt that overexpansion had occurred and that 1930 business would not exceed that of the previous year—that it might, in fact, decline slightly. A tendency toward restriction of credit at the close of 1929 and early in 1930 was noted, but by the close of February it had not become a serious factor; in fact, many authorities felt that this step should have been taken earlier. Increased activities of branches of American automobile finance companies in the country have tended to counteract the policy of the banks in restricting credit to automobile dealers.

While it was not expected that sales of passenger cars and trucks would increase as much in 1930 as in 1929, sales of passenger cars were expected to show a normal increase of at least 10 to 15 per cent and of trucks at least 20 per cent.

PASSENGER-CAR MARKET

Chilean import figures do not classify passenger cars and trucks according to price or weight. In fact, prior to 1928 no specific automobile import statistics were compiled. Consequently, it is very difficult to break down the figures to show types or price groups. With only the statistics at present available, it is even difficult to arrive at the total number of units imported in any one year. The most accurate figures available are those showing United States exports to Chile, but because of the change made in the United States classification at the close of 1927, the percentages shown in the following table are not entirely accurate. Prior to 1928, the export classifications showed cars valued at $800 to $1,200. To make the figures fit into the present classifications, it has been arbitrarily assumed that 50 per cent of this classification should be included in the present classification covering passenger cars valued up to $1,000. The balance has been added to the former classification, which covered passenger cars valued between $1,200 and $2,000, to arrive at the present classification of cars valued between $1,000 and $2,000.

UNITED STATES EXPORTS OF COMPLETE PASSENGER CARS TO CHILE, BY PRICE CLASSES

Price classification	1925		1926		1927		1928		1929	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Up to $1,000	1,301	79.6	1,235	79.8	1,174	65.8	2,443	61.2	2,887	52.5
$1,000 to $2,000	285	17.4	260	16.8	515	28.8	1,384	34.7	2,420	44.0
Over $2,000	49	3.0	53	3.4	97	5.4	162	4.1	196	3.5
Total	1,635	100.0	1,548	100.00	1,786	100.0	3,989	100.0	5,503	100.0

1,696

The above table does not, of course, include the production in the Chilean assembly plant of an American manufacturer. If this figure were added, it would have the effect of substantially raising the ratio of cars in the low-priced group. It is felt, however, that even were these figures added, the general trend indicated in the table would be unchanged, though undoubtedly the increase resulting in figures for cars of the low-priced class would affect only the ratio of sales in the medium-priced class, and the trend in sales to this group would be less pronounced.

It will be noted from the table that during the past five years there has been comparatively little change in the proportion of business obtained by the high-priced cars. There has, however, been a very noticeable shift from the low-priced cars to those of the medium-priced class. It is questioned whether there will be any early material increase in the proportion of medium-priced cars exported to Chile, though it is believed that any loss which might appear in the present ratio, except as might appear in years of general business depression, would be small and largely absorbed by the low-priced group. The principal demand in the undeveloped sections of the Chilean market during the next few years is expected to be primarily for low-priced cars, which would tend to counteract any tendency in the more highly developed sections toward cars of the medium-priced class.

Closed cars commenced to enter the Chilean market in appreciable quantities in the latter part of 1927, since when there has been a very rapid increase in sales in all sections except the north. North of Coquimbo, closed-car sales probably amount to more than 10 or possibly 15 per cent of the total; the demand has grown so rapidly in other parts of the country that, of the total imports, 40 to 50 per cent of the cars selling in the United States for under $700, 60 to 75 per cent of those selling up to $1,200, and 85 to 95 per cent of cars selling at over $1,200, it is estimated, are closed models.

The greatest demand for closed cars is found in Santiago; that in Valparaiso is nearly as great. One factor in favor of the open car in the lowest-price field is the difference in price between the open and closed models. In the rural districts, especially, price is a determining factor; moreover, climatic conditions in southern Chile strongly favor the open car. But dealers, except those in the extreme north, generally feel that within a year the ratio of closed to open cars in Chile will approximate that existing in the United States.

The rule of the road in Chile being to the right, the left-hand drive is preferred. Although the Chilean purchaser prefers to have his car equipped with as many accessories as possible, standard equipment as supplied by the factory is generally acceptable, and dealers seldom equip the car with additional accessories.

The demand for wire wheels is very strong. It is customary, especially on more expensive cars, to equip with six wheels and tires. Fenders with wells for carrying this extra equipment are preferred, as Chileans generally desire a trunk rack at the rear.

While any color is acceptable, light and brilliant shades are generally preferred. Because of the great amount of dust during the summer season (throughout the year in the north), it is difficult to keep cars of dark colors clean. Flashy body trim is very popular; body stripes are much in demand.

Except in the north, where the climate is warm throughout the year and where there is always a great amount of dust, there is little preference as to leather or fabric upholstery. In the north leather upholstery is generally preferred.

Less than 5 per cent of the passenger-car sales, it is estimated, are of roadster, coupé, and cabriolet models. During the past year or two there has been some increase in demand for the cabriolet in Santiago and Valparaiso. The 5 and 7 passenger models are generally favored; in the more expensive cars 7-passenger types are preferred.

There are no construction requirements in Chile. In view of the condition of the roads, however, high road clearance is a desirable feature.

Sales of passenger cars for taxicab use have been restricted almost entirely to light, low-priced, 5-passenger touring cars. A few standard American taxicabs have been sold, but they have not met with general acceptance, and no sales have been made outside of Santiago. A slight tendency has been noted recently in some of the larger cities toward the use of cabs of a slightly more expensive class, and there are, of course, in those cities, a number of so-called "luxury" taxicabs, which, for the most part, are 7-passenger models; a large proportion are closed cars.

TRUCK AND BUS MARKET

As Chilean import statistics fail to classify truck imports by capacity (and prior to 1928 did not even show the number of units imported), the best indication as to the types in demand and the trend in the market is the export figures of trucks and busses from the United States to Chile. The following table shows the number of units exported during the past five years and the percentage according to capacity classification.

UNITED STATES EXPORTS OF COMPLETE TRUCKS, BUSSES, AND CHASSIS TO CHILE

Capacity classification	1925		1926		1927		1928		1929	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Up to 1 ton	1,119	69.7	457	54.6	526	61.5	416	34.4	1,021	42.9
1 to 2½ tons	349	21.8	275	32.8	273	31.9	732	60.6	1,240	52.2
Over 2½ tons	137	8.5	105	12.6	56	6.6	61	5.0	117	4.9
Total	1,605	100.0	837	100.0	855	100.0	1,209	100.0	2,378	100.0

910

The figures are not entirely representative of the truck demand in Chile, owing to the fact that the production figures of a local assembly plant of an American manufacturer are not included. The inclusion of these figures would increase the proportion of trucks in the classification of 1 to 2½ tons capacity. From the table it will be seen that there is an unusually large percentage of the truck sales of the 1 to 2½ ton models, but a very large part of this group consists of trucks of 1½-ton capacity. There has been a strong increase in the sales of 2 and 2½ ton trucks during the past two years, largely in Santiago and Valparaiso. A moderate number have been sold in the northern part of Chile, but very few south of Santiago, except in two or three of the larger centers. Sales of heavy trucks are made largely in the mining sections, but since 1926 there has been a steady decline in the ratio of these sales.

During the next two or three years heavy-truck sales are expected to continue to account for only about 5 per cent of the total, but as progress is made in Chile's road program, a gradual increase in sales of that type should result. Trucks of 1½-ton capacity will undoubtedly continue to be largest in demand, as the average Chilean purchaser desires a truck of the highest capacity at the lowest price, the latter being the determining factor in most cases. Light trucks are more suited to the roads in the country districts, particularly the southern. In many cases bridges in the south are of such light construction that the Government has prohibited the use of trucks of more than 2-ton capacity.

There are no Government regulations as to construction or tires. Pneumatic tires are generally used on the lighter models, but solids are popular on heavy trucks. Overloading is a very common abuse; owing to the difficulties encountered through the breaking of rear axles, the use of dual wheels in the rear is gaining in popularity in some sections.

The use of busses has developed rapidly during the past two years in Chile, and it is estimated that there are now 1,883 in operation. The bodies in use follow the general designs of standard types in the United States. Few municipalities have adopted any regulations governing the construction of bus bodies. In 1929, however, Santiago approved regulations for the use of only closed busses built to specifications similar to those covering busses in city use in the United States. None of the busses circulating in the city at that time met the specifications, and in order to prevent undue hardship to the operators, the effective date was advanced to 1930. At the present time no new busses will be registered which do not comply with the specifications. There is a strong tendency throughout Chile to accept regulations adopted in Santiago as more or less standard, in fact it is likely that other cities will adopt similar provisions in the near future. Valparaiso already follows in a general way the regulations in effect in Santiago.

In Santiago no bus will be registered unless built on a bus or semibus chassis. The factory specification as to the chassis capacity must be sufficiently great to exceed the weight of the body, plus that of the seated passengers authorized, the driver, and the collector, allowing 70 kilos (154 pounds) for each passenger and employee. All busses must be equipped with low-pressure tires. Two sets of detailed specifications have been issued by the city—one covering

busses to accommodate 19 passengers or more; the other, busses accommodating 29 passengers or more. The minimum wheelbase permitted is 141 inches for busses carrying 19 passengers and 183 inches for those accommodating 29 passengers. If the bus is to accommodate more than 19 or more than 29 passengers, the wheel-base length must be greater than the minimum specified for each class by 70 centimeters (27½ inches) to allow the introduction of another row of seats. The specifications are very explicit as to the space for driver's seat, passengers' seats, platform, etc. The minimum distance between seats is 70 centimeters. There are no regulations concerning the use of governors, type of drive, turning radius, or steering equipment.

In Valparaiso the present regulations, owing to the narrowness of the streets, prohibit the use of busses accommodating more than 25 passengers. During the past year or more Valparaiso has been following a street-widening program; early in 1929 it was semiofficially reported that this regulation would not be adhered to and that busses of greater than 25-passenger capacity would be registered.

Practically all busses are operated by individual owners. A few companies operate as many as a dozen units. Where an owner operates a single bus, he invariably drives and, by means of a large mirror placed above the windshield, is able to keep an accurate check on the number of passengers entering the bus. If more than a single bus is operated by an individual or company, inspectors are employed to keep a constant check on the number of passengers.

Bus fares are low in all parts of Chile, being equivalent generally to 2½ cents (United States currency) for the average city run. These low prices are necessary in order to meet similar charges of street cars.

Some truck dealers decline to handle bus business, since they feel that the credit risk is too great. Dealers handling the bulk of the business report, however, that although the credit period must be greater for busses than for trucks, the regular monthly payments are, nevertheless, generally promptly met. An operator does well to meet his payments and realize a profit, since the original equipment, tires, repair parts, and gasoline are all substantially higher than in the United States; the cost of labor is, however, very much lower. The owner-operator never sets aside a reserve for replacement of worn-out equipment; generally he is satisfied to earn enough to meet his monthly payments and to support himself and family.

The regulations adopted in Santiago will have the effect of eliminating a large number of small individual operators, since more expensive equipment is now required. Whether this will result in the formation of companies or the concentration of bus operation in the hands of the street-car company is uncertain, but it seems likely that one development or the other will result within the next few years. As a result of the regulations now in effect, it is estimated that in Santiago alone there will be a market for at least 200 to 300 units to replace busses to be retired.

The principal demand for busses at the present time is for city use. This demand may be expected not only to continue but to grow steadily and gradually. As progress is made in the construction of roads, a more rapid development may be expected in the demand for busses for interurban use.

BODY BUILDING

No industry has developed in Chile for the manufacture of passenger-car bodies except those built in the Santiago assembly plant of an American manufacturer, and no development in this direction can be expected for many years to come.

Because of the very high duty on truck and bus bodies, the importation of either type is impractical. Santiago is the only city where the body-building industry has been developed to any appreciable extent; even there the production of any one company is small. Outside of Santiago the great majority of truck and bus body building is done by companies formerly engaged in building carts and wagons or in small carpenter shops. In a few instances the larger dealers in such cities as Valparaiso undertake to build bodies, and in several of the larger centers one or two of the principal cart builders confine their activities largely to the building of truck and bus bodies.

There is a great variation in the quality of bodies turned out, but in Santiago some excellent work is done. The average truck purchaser is generally an individual of limited means, desiring a strong but low-priced body.

The greatest demand is for the simple platform or stake body. There is a small demand in Santiago and Valparaiso for the inclosed or semiinclosed delivery-type truck body, but outside those two cities practically no demand whatever exists. A body with general acceptance for hauling construction materials, agricultural products, etc., is so built that not only the tailboard but both sides can be let down, thus facilitating the loading and unloading of the vehicle. It was reported in 1930 that the demand was about equally divided between that type and the type which permitted the dropping of merely the tailboard.

Truck bodies in Santiago and Valparaiso range in price from $200 to $300. In northern Chile the average is approximately the same or slightly higher, but in the south prices decline in the centers approaching the lumbering districts. The prices for the cheapest types of truck body in any of the centers south of Santiago average 25 to 50 per cent below prices for similar types in Santiago. In many cases the workmanship is much inferior to that in Santiago, but a strong body suitable to the needs of the user is built, and the price is a primary factor.

There is a wide variation in the cost of bus bodies, even those having equal seating capacities. Standard bodies for 19 passengers, built according to the specifications of the city of Santiago, range in price from $700 to $1,000 or slightly over. Those seating 29 passengers average around $1,500.

The lumber used in body building, with the exception of veneers, is all secured locally, and a few of the simpler metal parts are also of local manufacture. Upholstery materials and the more highly finished types of body hardware are imported. In many items the prices of European products are so much below the American that it is impossible to compete. The quality is generally inferior to that of the American product, but price is the determining factor.

Not more than two or three of the largest firms, when working at full capacity, have a production exceeding 30 bodies a month; in

the majority of cases the production is much lower. The production of any one firm naturally depends upon the volume of orders and the type of body in production. It is doubtful, however, if the average production of body builders, even in Santiago, runs over 10 or 15 units per month.

MOTOR-CYCLE MARKET

Chilean import statistics show only the value of motor cycles entering the country. As will be seen from the accompanying table, the demand for motor cycles more than doubled in 1928, and it is believed that the 1929 figures will show a further marked gain.

IMPORTS OF MOTOR CYCLES INTO CHILE

[In pesos]

Country of origin	1925 [1]	1926 [2]	1927 [2]	1928 [2]
Belgium			2,200	4,250
France	210	4,820	9,905	2,937
Germany	1,507	2,270	4,683	
Great Britain	100	23,641	19,177	28,760
Italy		49,800	11,760	6,940
Sweden		3,296		
United States	6,074	37,408	27,647	139,737
Total	7,891	121,235	75,372	182,624

[1] The official valuation was 1 peso equals $0.365.
[2] The official valuation was 1 peso equals $0.1217.

The market for motor cycles in Chile is still small; the maximum annual demand probably does not exceed 150 or 200 units. More than 50 per cent of the total demand is divided between Santiago and Valparaiso, Santiago being the more important.

Approximately 20 per cent of the motor cycles have side cars. Side cars for passengers are invariably imported complete; in the latter part of 1929 the commercial car began to be introduced, the principal effort in this direction being made by German manufacturers. The German practice of having the package car in tandem with the driver appears to have met with greater acceptance than having it in the form of a side car, though a few American machines have been sold with commercial side cars.

A very few motor cycles have been sold to the police and military departments, but the largest sale has been for sport use.

Road conditions have played an important part in the restriction of motor-cycle sales in the less thickly populated sections of the country. In view of the progress which is now being made and which should result in the opening up of additional sales possibilities, American manufacturers should attempt to secure through their distributors suitable representation in all the principal sale centers. It is believed that 1930 will show a substantial increase in sales over 1929, and that trend should continue in succeeding years if proper representation is obtained throughout the country.

Including the European makes on the market, the demand for motor cycles is about evenly divided between machines of one and two cylinders. In American machines, the 2-cylinder type is preferred.

MARKET FOR ACCESSORY LINES

The manufacture of accessories, replacement parts, and garage equipment has had practically no development in Chile up to the present time. There is a small production of a few items, such as spring leaves, but in no case is it sufficient to offer serious competition to the imported product. Although Chile is making steady progress in its industrial development, it will probably be a number of years before local manufacturers reach the point where they are able to supply a large part of the demand for even the simplest types of articles. Likewise, European competition is unimportant except for a very few items. A large percentage of the cars and trucks in circulation in the country are of American manufacture, and that percentage will, in all probability, continue to increase. Inasmuch as the demand for most American replacement lines is in direct relation to the ratio of sales of American cars, the American manufacturer may be expected at least to maintain his present position.

Where European or domestic competition exists, it will be mentioned under the individual items discussed in the following sections:

ACCESSORIES

Ash receivers.—Only a very small demand is evident for ash receivers in any part of Chile; such as exists is confined almost exclusively to Santiago and Valparaiso.

Baggage carriers.—Baggage carriers are very much in demand; particularly for the better class of cars, but there is also a growing demand for use on many of the lower-price cars. Those carriers preferred are for use at the rear of the car. Likewise, there is a moderately good demand for rear trunks. There has been very little demand, however, for trunks used on the running board.

Chains for tires.—In northern Chile, where it rarely rains, there is no sale whatever for tire chains. The demand is moderately good in central Chile and very good in the southern section.

Cigar lighters.—A very small demand exists for cigar lighters; it is largely confined to replacements.

Heaters.—Heaters have no sale whatever. From Santiago north the weather is not sufficiently cold, even in the winter, to require this equipment. While cold weather is encountered in southern Chile, the roads are in such condition during the winter, the rainy season, that the use of an automobile is impossible.

Horns.—The largest demand for horns in Chile is for the electric type. Approximately 90 per cent of horns sold are of American manufacture. The Robert Bosch (German) is the principal European competitor. Bulb horns still sell well in the country districts; the demand is supplied almost entirely by European manufacturers, notably French. German bulb horns have a good sale as replacements.

Jacks.—Jacks sell well in practically all parts of the country.

Lamps.—The demand for head and tail lamps is confined almost entirely to replacements, supplied principally by the individual car dealers. There is a fair sale of spot lights throughout Chile. Stop lights have a moderately good sale in Santiago and Valparaiso, but elsewhere practically no demand has yet developed. The lettering on stop lights for Chile should read "Pare."

Locks.—A moderately good demand exists in most parts of Chile for locks of various types to be used on tires and extra wheels. There is practically no sale for special car locks, since the locking devices supplied by the car manufacturers are considered adequate. Locks for radiator caps and speed indicators have a good sale.

Bumpers.—Bumpers are one of the few automotive accessories manufactured locally; local products supply the majority of the demand. Some American products are sold, and there is practically no competition from European manufacturers.

Shock absorbers.—In the past there has been a very large demand for shock absorbers, particularly of the hydraulic type. Although American manufacturers commonly supply them as standard equipment, the demand still continues good.

Mirrors.—The demand for rear-view mirrors is fair. American products dominate the market, but there is a moderate amount of European competition.

Radiator shutters.—There is no demand whatever in Chile for radiator shutters.

Ornaments.—There is a fair market for ornaments of various kinds, but the sale of any one product is small. A number of cheap European ornaments have been sold, and a few locally-made novelties have been offered at various times.

Taximeters.—French companies practically control the market for taximeters. The municipal governments of Santiago and Valparaiso, where the principal demands exist, have granted concessions to French manufacturers giving them practically a monopoly of the market.

Tire pumps.—An excellent demand exists in all parts of the country for hand-tire pumps. A few low-priced European products are on the market, but the competition is not considered serious.

Tire covers.—An increase in sales of tire covers was noted in the closing months of 1929 and the early part of 1930. Approximately 50 per cent of the sales are of imported products; the rest are made locally from imported materials.

Windshield visors.—There is a very small sale of windshield visors which are seldom purchased when not provided as standard equipment.

Windshield wings.—Windshield wings have had a very large sale in practically all parts of the country, but with the very rapid increase in sales of closed cars, this demand is expected to decrease.

Windshield cleaners.—As there is no rain in northern Chile, there is no demand whatever for windshield cleaners there. A moderate demand exists in central and southern Chile.

Air cleaners and oil purifiers.—The sale of oil purifiers and air cleaners is confined almost exclusively to replacements; sales for the former are fair, for the latter very small. Most sales are made by the car dealers.

Clocks.—Clocks have a small sale, largely as replacements.

Tire-pressure gauges.—There is a good sale for tire-pressure gauges in practically all parts of the country.

The fact that American automobile manufacturers are annually adding accessories as standard equipment is having a direct effect on their sale. It is generally felt that in most lines the demand will be merely for replacements. Until that point is reached, sales are expected to decline annually until they reach a nearly constant point. As the number of cars in circulation increases, the demand for replacements will naturally show a small gain.

In supplying such equipment as speedometers and gasoline gages, the metric system of measurement should be used. There is no particular objection to gasoline gages which indicate merely that the tank is one-fourth, one-half, or three-fourths full, but if the liquid content is to be shown on the gage, it should be in liters, the measure used in selling gasoline.

PARTS FOR REPLACEMENTS

With the constantly increasing number of passenger cars and trucks in Chile, there has been a corresponding increase in the sale of replacement parts. The increase for practically all lines during 1928 and 1929 was very great, and a further gain in sales was expected during 1930.

The market conditions for the more important replacement parts are indicated below; unless it is specifically stated, European manufacturers supply only the parts needed for European cars.

MOTOR PARTS

Bearings.—There is a good demand for ball, roller, and bronze bearings throughout Chile. There is strong European competition in ball bearings, principally from Swedish and German manufacturers. S. K. F. supplies practically 25 per cent and German products about 15 per cent. Sales of roller and bronze bearings, however, are almost entirely of American products.

Belts, fan and pump.—Belts for fans and pumps have a good demand, particularly in central and southern Chile.

Bushings.—Bushings have a fair demand in most parts of the country.

Valves.—The sale of valves for motors is good in practically all parts of the country. The demand is supplied almost entirely by the car dealers.

Pistons.—Pistons, piston rings, and piston pins have an excellent sale in all parts of Chile.

Carburetors.—The sale of carburetors is confined exclusively to replacements, and the demand is small; those purchased are secured from the car dealers.

Chains, drive.—There is a very small market for drive chains, since when a break occurs they are generally repaired.

Fans.—There is a small demand for fans for replacement purposes.

Radiators and parts.—There is a small market for radiators and radiator parts throughout the country. Owners of low-priced cars frequently purchase new radiators if any serious damage occurs, the cost of repairs being high. Radiators in the more expensive cars, however, are generally repaired.

Shims.—There is a moderately good market for shims in the more important distributing centers of Chile. Complete shims are usually imported, though in some instances they are cut out from imported material.

Gaskets.—There is a good sale for gaskets in practically all parts of the country.

Ignition cable.—Ignition cable has a fair sale in central and southern Chile, and there is a very small amount of European competition.

Timing gears.—A small demand exists for timing gears, supplied entirely by car dealers.

Spark plugs.—A moderately good demand exists for spark plugs.

Starting and ignition equipment.—The demand for starting and ignition equipment is supplied by car dealers.

CHASSIS PARTS

Axle shafts.—Only a small demand exists for axle shafts for passenger cars, but, owing to the general practice of seriously overloading trucks and to the poor roads in many parts of the country, the sale of axle shafts for trucks is fairly good.

Brake assemblies.—There is practically no demand for brake assemblies.

Clutch facing.—Numerous steep grades are encountered in all parts of Chile; as a result the demand for clutch facing is excellent.

Brake linings.—As is the case with clutch facings, brake linings have an excellent sale. The steep grades and the tendency of drivers in Chile toward fast driving and the sudden application of brakes result in frequent burning out of this material.

Springs and leaves.—A good demand exists in most parts of the country for springs and leaves. Approximately 80 per cent of the demand is supplied by American manufacturers, the rest locally.

Wheels and parts.—Reckless driving over rough roads results in frequent breakage of wheels, so that the sale of both wheels and parts is moderately good.

Rims.—A good demand exists for rims for use on low-priced cars but very little for use on higher-priced cars.

Differential assemblies.—There is a moderately good sale of differential assemblies for trucks because of serious overloading. The demand for passenger cars, however, is small.

Transmission gears.—A small demand exists for transmission gears.

Universal joints.—Universal joints have a small sale.

Such items as fenders, frames, hoods, steering apparatus, and drive shafts are generally imported by representatives of the various automobiles, who carry stocks for themselves and for dealers appointed by them.

BODY PARTS

Body hardware.—A large part of the body hardware used in locally built truck and bus bodies is of local manufacture. Of the imported product the demand is about equally divided between European and American supplies.

Glass.—Practically all window and windshield glass sold in Chile is imported from Europe. American manufacturers have been unable to compete in price with the European producers.

Tops and bows.—Owing to the very rapid increase in sales of closed cars, the sale of tops and bows is steadily declining. Those sold are imported from the United States.

Top material.—A good demand exists for material for renewing tops but is expected to decline as the number of open cars decreases. At present, the United States supplies approximately 70 per cent of the demand. Great Britain is the principal competitor. A very small amount is produced locally.

Seat covers.—There is no demand whatever for made-up covers, but there is a fair market for material for covers to be made up locally. Most of that used is of Spanish manufacture.

SERVICE APPLIANCES

The market for service appliances of various types has been late in developing in Chile; it was not until the latter part of 1929 that any substantial market appeared. With the rapid increase in the number of cars and trucks registered in various parts of the country, a steady increase may be expected in the sales of these products. The demand at present is confined largely to Santiago and Valparaiso, but they are also beginning to enter Antofagasta, Concepcion, Temuco, Talca, Valdivia, and other important centers.

Air and water towers.—A few sales of air and water towers have been made, practically all in Santiago and Valparaiso.

Air compressors.—A fair demand has developed for air compressors in the larger centers of the country. It is expected that the demand in 1930 will increase substantially over the previous year.

Brake-relining machinery.—There is a fair and growing demand for brake-relining machinery throughout the country.

Battery charging and accessory equipment.—Many of the larger garages and repair shops are installing battery charging and testing equipment for which there is a growing demand.

Car-washing equipment.—A few sales of car-washing equipment have been made in three or four larger centers; there is a growing interest in this product.

Engine stands.—The demand for engine stands began early in 1930; it is expected to expand steadily in the future.

Hoists and cranes.—A few sales of hoists and cranes have been made, almost entirely in Santiago and Valparaiso.

Garage creepers.—There is no demand whatever for garage creepers.

Paint-spraying equipment.—The market for paint-spraying equipment is small, but it is growing in interest. Probably not over 30 or 35 units have been sold in Santiago and possibly 4 or 5 in Valparaiso. Only isolated sales have been made in other parts of the country.

Automatic electric tools.—A small but growing market exists for various types of automatic electric tools. German competition is important because of price.

Garage jacks.—A small but growing demand exists for the larger types of garage jacks.

Garage presses.—There is a fair sale for garage presses in the more important distributing centers.

Automotive reamers.—The sale of reamers is good in practically all parts of the country. While there is some French competition because of price, the American product, because of its superior quality, dominates the market.

Automotive wrenches.—Wrenches of various types have an excellent sale throughout the country; the principal competition to the American product comes from low-priced German tools.

Cylinder-reconditioning machinery.—A fair demand exists for cylinder-reconditioning equipment in the larger centers.

Towing and wrecking equipment.—There is very little sale for towing and wrecking equipment; probably not over four or five units have been sold in the entire country.

Service runways.—A few of the larger garages and service stations installed service runways early in 1930; it is expected that there will be a slow but steady increase in sales.

Tire-service equipment.—There is a good demand throughout Chile for tire-repairing equipment.

Hydraulic and mechanical lifts.—Hydraulic and mechanical lift equipment is just beginning to enter the market, but it is believed there will be a steady increase in sales in the larger centers.

SERVICE-STATION FACILITIES

In practically all parts of Chile the better service stations are operated by car dealers. In the larger centers small independent service stations are to be found, but they are not generally so well equipped as the service stations of dealers; the facilities usually leave much to be desired. Costs of labor in all parts of the country are very much below those of the United States, but workmanship is generally much inferior. The low cost of labor and the comparatively small number of cars in any one center have been the principal factors in delaying the introduction of modern mechanical appliances. The number of vehicles in circulation has increased very rapidly in the past two years, and with gradually increasing labor costs it is to be expected that there will be a moderately rapid growth in sale of the simpler types of automatic equipment.

FOREIGN COMPETITION

PASSENGER CARS

European passenger-car sales have played a much more important part in the Chilean market during recent years than in most of the other South American countries. Detailed figures are not available as to the total number of cars imported from any one country, since the Chilean Government does not indicate imports by units. The following table, based on value, shows the relative position of the various countries as suppliers of passenger cars to Chile from 1923 to 1928:

Origin of Passenger-Car Imports into Chile

[In per cent of total value]

Country of origin	1923	1924	1925	1926	1927	1928
Belgium	23.67	0.70	0.24	0.61	3.37	1.03
France	3.21	2.52	5.64	8.10	3.37	1.07
Germany	5.18	5.28	5.00	.91	1.09	.53
Great Britain	1.77	2.60	1.74	.98	.91	.73
Italy	1.84	10.42	9.64	8.70	4.62	1.42
United States	63.95	78.33	77.49	79.83	86.25	94.87
Other countries	.38	.15	.25	.87	.39	.35

During and immediately following the World War the United States supplied practically the entire demand for passenger cars, but in 1921 and 1922, two years of serious business depression, imports from Europe considerably exceeded those from the United States. In 1922 the value of imports from the United States reached their low point, representing only slightly over 36 per cent of the total; the value of imports from France slightly exceeded this figure. The ratio of imports from the United States jumped sharply in the following year and since that time has gained consistently until, in 1928, practically 95 per cent of the value of passenger-car imports was supplied by the United States.

Since 1924 the ratio of imports from most European countries has shown a steady decline. Although the imports from Italy have shown a rapid decline, Fiat undoubtedly offers the greatest competition of any one of the European makes. The French Renault and Citroën are the next most important competitors. No European car, however, offers serious competition to the American product; in fact, it is generally believed that European manufacturers are steadily finding it more difficult to compete. Furthermore, such competition as exists is largely confined to Santiago and Valparaiso.

TRUCKS

A very irregular trend appears in the proportion of trucks supplied by various countries. The following table shows the participation of each in the value of the total imports:

Origin of Truck Imports into Chile

[In per cent of total value]

Country of origin	1923	1924	1925	1926	1927	1928
Belgium	----	16.42	----	1.62	----	0.16
France	0.04	----	1.48	10.06	3.71	.97
Germany	16.84	2.51	3.04	2.62	3.12	1.15
Great Britain	33.70	.74	----	29.45	47.73	.47
Italy	1.18	1.79	2.40	3.14	.39	.32
Switzerland	----	2.23	----	1.44	----	.85
United States	47.36	76.28	93.08	50.39	45.05	96.05
Other countries	.88	----	----	1.28	----	.03

It is interesting to note that in 1928, a year of unusually heavy imports of trucks, the United States secured 96 per cent of the business; it is believed the percentage also holds good for 1929. In spite of the low ratio of imports from the United States during 1926 and 1927, European trucks do not appear to have made as much progress as is indicated by the figures, owing largely to the fact that inasmuch as many European trucks imported in the past have been heavy models of high unit value, the total number imported has undoubtedly been less than indicated by the value. Certainly during 1928 and 1929 very few were sold, and dealers generally consider that European competition is negligible.

A great variety of makes of European trucks have been sold, but no one has seriously cut into the sales of American trucks. The Fiat and Renault have probably had the largest sales of any individual

makes during the past two years. As the present demand in Chile is for lighter types of trucks of low price, there is little likelihood of any serious competition from European manufacturers in the immediate future.

MOTOR CYCLES AND ACCESSORY LINES

European competition is much more apparent in motor cycles than in passenger cars or trucks. Since early in 1928 about 30 per cent of the motor-cycle demand has been supplied by European manufacturers. Prior to 1928 the ratio varied greatly from year to year, and European competition was much more important than now. Apparently very few European machines have had continued favor. A number of lines have been imported on a more or less trial basis and dropped after considerable difficulty arose in disposing of the initial orders. The D. K. W. (German), Raleigh (British), and the Peugot (French) are undoubtedly the strongest European competitors at present. The BMW (German) and the Triumph (British) have also had some success.

The principal competition in motor cycles with commercial side cars comes from D. K. W.

CUSTOMS DUTIES AND TAXATION

Duties on automotive products are assessed on the gross weight. The par value of exchange as fixed by the Government is 1 peso to $0.1217. Although the exchange rate is regulated by the Government, the currency is backed by an extremely high gold reserve, and there is no reason for any marked fluctuation in the rate of conversion.

Under the law of February 22, 1928, the tariff schedule on automotive products was entirely changed and, for the most part, reduced. On January 30, 1930, Congress passed a law increasing the duties by 10 per cent of those then in effect. The duties now in effect are as follows:

	Pesos per gross kilo
Passenger cars:	
Weighing up to 1,500 kilos	0.88
From 1,501 to 2,000 kilos	1.045
From 2,001 to 2,250 kilos	1.21
From 2,251 to 2,500 kilos	1.43
From 2,501 to 3,000 kilos	1.87
From 3,001 to 3,500 kilos	2.31
Over 3,501 kilos	2.75
Automobile chassis	.11
Automobile bodies	6.60
Motor cycles	1.50
Automotive parts, not otherwise specified	1.32

Passenger cars shipped in a knocked-down condition, if not painted, soldered, welded, upholstered, or varnished, are subject to a reduction of 30 per cent of the duties specified, and the reduction granted in such cases is to be not less than 300 pesos.

There is a customs surtax of 10 centavos per 100 kilos or fraction on the gross weight of all imports and exports.

As the duties are assessed on the gross weight, the packing of automotive products should be as light as consistent with security of

the cases, for in ports other than Valparaiso the cargo is discharged to lighters and cases frequently receive rough treatment. Great care should be used in making up consular documents; errors are likely to delay the clearance of a shipment and may result in fines or even confiscation.

Firms interested in securing more detailed information as to the duties applying to accessories, replacement parts, and garage equipment, or detailed data as to the consular invoice fees and regulations, are invited to write the Division of Foreign Tariffs of the Bureau of Foreign and Domestic Commerce.

TAXES

The highway law of 1929 imposed a sales tax of one-half of 1 per cent of the retail sales price on motor vehicles; it applied only to the original sale of new units. This tax, together with a sales tax and a special import duty on gasoline for road and bridge funds, was removed by a law passed early in March, 1930. To compensate for the resulting loss of revenue, the basic import duty on gasoline was increased by 12 centavos a kilo, roughly 4½ cents a gallon. There are now, therefore, no direct sales taxes of a national character on automotive products.

There are, however, municipal taxes covering the registration of motor vehicles, varying considerably in amount and slightly in method of assessment. The taxes in effect in Santiago, the highest in the country, are listed in the following table:

MOTOR VEHICLE TAXES IN SANTIAGO

Type	Pesos	United States currency equivalent
Passenger cars:		
Taxicabs—		
Without meters	300	$36.00
With meter, valued up to 10,000 pesos	50	6.00
With meter, valued from 10,001 to 15,000 pesos	60	7.20
Private cars—		
Valued up to 10,000 pesos	120	14.40
Valued from 10,001 to 15,000 pesos	200	24.00
Valued over 15,000 pesos	300	36.00
Busses:		
Valued up to 12,000 pesos	100	12.00
Valued over 12,000 pesos	150	18.00
Trucks:		
Capacity up to 1½ tons	100	12.00
Capacity 1½ to 3 tons	200	24.00
Capacity 3 to 6 tons	300	36.00
Capacity over 6 tons	500	60.00
Motor cycles:		
Without side car	50	6.00
With side car	70	8.40

ADVERTISING

Newspapers are generally considered the best medium for advertising automotive products in Chile. The Santiago papers, El Mercurio and La Nacion, have a circulation throughout the country. There are, however, local newspapers in all principal centers which are more effective in reaching the local buying public. In addition to the newspapers, there are a number of weekly reviews and a few technical and trade periodicals with a more or less national circulation. Publications of automobile clubs are usually rather good mediums. One American automotive trade journal has a large general circulation throughout Chile and is followed closely for developments in the industry.

As a whole, however, advertising is not highly developed in Chile; there are no advertising agencies like those in the United States, which place copy throughout the country, maintain checking services, etc. The general importers and dealers should be given considerable discretion in the choice of newspapers and periodicals used for advertising, since the value of each varies somewhat from year to year. The same holds for the time to place advertising. The buying season varies somewhat in different parts of the country, and the dealer is in the best position to know when advertising can be most effectively placed. Considerable help can be rendered to the local firms through supplying cuts, mats, etc. Suggested texts are also helpful but should be supplied only in Spanish. Material should, moreover, be so prepared that changes in wording can be made without difficulty, as there are many colloquialisms which are effectively used.

While advertising matter is dutiable, single copies of catalogues, price lists, folders, and other advertising material are not held for duty if sent by mail at printed-matter rates. It is preferable to ship them singly and not by parcel post, though large quantities may be shipped by parcel post or included in a package with other commodities without changing the customs treatment of either, provided they are mentioned on all shipping documents and customs declarations. Shipments should never be made by parcel post except where the addressee has expressly so requested, for the addressee receives an official notice that a package has arrived but has no means of ascertaining its contents until after payment of delivery fees, stamp taxes, etc. Moreover, considerable delay and inconvenience are also experienced in securing the clearance of parcel-post packages.

All types of advertising material intended for the trade at large or for general distribution should be applied only in Spanish. It is highly desirable that advertising circulars and catalogues should be profusely illustrated and that they include full data as to weights and measurements of various products, both boxed and unboxed. These data should, of course, be given only in metric units.

Manufacturers of passenger cars and trucks would simplify the work of the importer and reduce the possibility of error to a minimum if catalogues of repair parts were to have each individual part illustrated and numbered in accordance with the numbering shown in various parts in the text. As the technical terms for various parts differ somewhat in the different Latin American countries, any misinterpretation of the text would be largely obviated.

AUTOMOTIVE INSTALLMENT SALES [1]

The development of installment selling of automobiles, trucks, and busses has grown steadily in Chile. While six or seven years ago only occasional sales were made on deferred payments, to-day approximately 80 per cent of the passenger cars, 70 per cent of the

[1] Based partly on reports of American Commercial Attaché Ralph H. Ackerman, Santiago.

trucks, and 95 per cent of the chassis for busses are so sold. While not many lower-priced passenger vehicles are sold for cash, between 40 and 50 per cent of those selling at about $3,000, it is estimated, are paid for at time of delivery.

Automobile finance companies have been established in Chile during the past year or two. In Santiago and Valparaiso a very large part of the time financing is now handled by the regular finance companies, whose activities are gradually extending all over the country. Dealers in the past have, for the most part, been financed by banks; a few of the strong importers in Santiago and Valparaiso have handled their own financing and that of their dealers in various parts of the country. The banks are now restricting their credit to automobile dealers, and the finance companies are constantly extending the scope of their work. A few of the strong importers are still financing themselves and their dealers, either alone or through credits received from banks, but such financing is steadily declining. Most of the dealers throughout Chile are not sufficiently strong financially to handle their own credit needs, and with the growing tendency of banks to decline to discount automobile paper, a rapid growth in the business of the finance companies may be expected in 1930.

TERMS OF SALE

Regularly established automobile finance companies insist that dealers secure one-third the total cost of the vehicle as the down payment with the credit period 12 months for passenger cars and 18 months for trucks and busses. Conditions vary somewhat in different parts of the country, however, and it frequently happens that as little as 25 per cent or less is accepted. Dealers also usually attempt to restrict the period of payment as much as possible, but they frequently have to extend the time beyond that customarily required by the finance companies. It is not uncommon for the dealer to have to make extensions in the duration of payments as the contract draws to a close.

Companies handling their own financing generally have no set terms, varying the conditions with the individual case. Naturally, they are interested in securing as large an initial payment and as short a credit period as possible. Some dealers selling truck chassis to bus operators regularly grant two to two and one-half years, but others who consider the bus business a rather poor risk are inclined to restrict the time even more than in truck sales.

Practically the same conditions and terms are in effect in financing sales of secondhand as for new cars, with an increased initial payment (50 per cent is common) and smaller but more extended monthly installments. Many used-car sales are to taxi drivers, who require longer periods for completing payments.

METHODS OF FINANCING

Prior to 1930 all time sales were made under either a conditional-sale or a hire-purchase contract, probably 70 per cent under the latter. Under these systems there was very great uncertainty as to the ability of the dealer either to repossess the car or to force payment in the event of default, there being no legislation clearly defining the responsibilities of the contracting parties to such agreements and no uniform practice having developed. Consequently there was a great deal of uncertainty connected with the financing of automobiles, and finance companies were extremely cautious in entering the Chilean market.

To correct these deficiencies and to define clearly the rights of purchasers and sellers under deferred-payment contracts, a law was enacted providing a sort of chattel mortgage on objects sold in this manner; it was approved on December 3, 1929. Contracts complying with the law were put into use the latter part of January, 1930. Among other things, the law specifically mentions automobiles, trucks, tractors, coaches, wagons, busses, bicycles, and motor cycles as articles to which the law applies.

The sales contract and chattel mortgage must be a single instrument and must be attested by a notary or an official of the civil registry office. To have legal standing the instrument must be registered in a special securities register in the department (county) where the sale is made.

Under the provisions of the chattel mortgage law, regular payment may not be made in less than weekly installments. As a protection to the purchaser, the seller can not demand full payment until the purchaser has failed to meet at least four installments.

This feature of the law has caused some concern on the part of finance companies. Some legal authorities hold that the vehicle could be repossessed and held as security for any amount in arrears after the purchaser has failed to make a single payment; the car could not be auctioned off for the complete amount due under the contract, however, until the purchaser had failed to meet three additional payments, and if the total amount due should be paid prior to the due date of the fourth unpaid installment, the purchaser would again be entitled to possession of the vehicle. Others feel that no repossession action can be taken until four installments are due.

The law is too new to have had any test cases on this point, but decisions in the matter will be of considerable importance to the finance company. Should the courts decide that no repossession action can be taken until four installments are overdue, it will, of course, be possible for the finance company to require that the installments come due at weekly intervals, dividing the usual monthly installments into four equal parts. It is felt, however, that should this be necessary, arrangements could be made whereby collections would be made only once a month, as the contracts are made with promissory notes attached covering the individual installments, the expense connected with the paper work and collection would otherwise be increased. Finance companies wish to avoid this if possible, and until unfavorable decisions are handed down by the courts, they will undoubtedly operate on the usual basis of installments extending over monthly periods.

It is a criminal offense for the purchaser to sell, transfer, or remove the car without the permission of the seller. The seller may inspect it at any time and can secure a repossession order from the court for his protection, if this is deemed necessary. In the event of a sale or transfer without permission, the vehicle may be repossessed immediately.

FINANCING CHARGES

Financing companies make a flat charge of 9 to 9½ per cent, the exact method of computation varying with individual companies. One company makes a flat charge for the financing and an additional flat service charge. Another makes a flat financing charge plus a uniform service charge of 50 pesos regardless of the value of the car. The flat charge is invariably made on the total amount financed, for the period financed, and divided into 12 equal parts (where the car is financed for a period of one year); on this basis the actual interest paid by the purchaser amounts to over 16.5 per cent per annum. There has been some talk among the finance companies of increasing their flat charge to 10 per cent, since they claim the margin of profit is too small at present.

The total charges for financing must not exceed the average bank interest rate, as published by the Government, by more than 50 per cent, another feature of time sales causing concern among finance companies. It is believed that they will ultimately make a test case of this feature.

The official bank interest rate as published in the Gaceta Oficial at the first of 1930 was 9.4 per cent, which would make the maximum interest rate allowable for financing automobile sales under the chattel mortgage law 14.1 per cent per annum. Opinion differs as to whether finance companies could operate profitably at this rate of interest. Moreover, should the bank interest decline, activities of the finance companies would be likely to be seriously restricted.

There is no regularity whatever in the charges made by dealers who finance their own sales or are financed by banks; however, their financing charges are usually lower than those of the finance companies. In many instances a flat charge of 1 per cent a month on the amount due is made; in other cases dealers charge only the bank rate. But with the increasing volume of sales and the tendency of banks to restrict credit on automobile paper, dealers, finding it more difficult to handle their own financing, are turning more and more to the finance companies.

REPOSSESSIONS

The chattel mortgage law does much to clarify the question of repossession. Prior to the law there was always a serious question as to whether a car could be repossessed, great care being necessary in drawing contracts. For added protection, dealers invariably insisted on the signature of a responsible guarantor on the contract and on all notes attached thereto. This protection is still required to some extent by dealers financing their own sales, in order to avoid the necessity of making repossession. The finance companies invariably require the signature of the dealer as well as the purchaser on all paper which they handle.

Repossession is now simple. A court order may be secured and the vehicle sold at public auction under the direction of the General Bankruptcy Syndic, which acts as trustee. After costs of action, etc., are deducted, the balance is paid to the seller. If the amount received is not sufficient to liquidate the debt, a court order attaching other property of the purchaser to the extent of the debt remaining may be secured.

The holder of a chattel-mortgage contract has an absolute prior lien; in the event of bankruptcy, the article mortgaged does not go into the general assets. If a car is illegally sold or transferred, it may be immediately repossessed from the third party.

While the percentage of repossession varies somewhat throughout the country, the average is 1 per cent of all sales. Repossession would undoubtedly be resorted to in a larger number of cases, however, if slight extensions were not made in payments when the purchaser is believed able eventually to meet his obligations.

GENERAL COMMENTS

It is not uncommon for finance companies to withhold a part of the amount to be paid the dealer until final payment by the purchaser. In event of bankruptcy of the dealer, the amount withheld could not, according to legal opinion, be classed as a quick asset until final payment on the contract. This is another point, however, on which no court decision has been rendered; apparently no liability is incurred by the finance companies through this practice.

The finance companies and dealers do not generally require that insurance be placed on cars sold on time. As automobile insurance rates throughout Chile are very high, probably not over 10 or 15 per cent of the cars are insured. Some dealers cover their risk by adding slightly to the selling price and thus build up a reserve to cover any losses resulting from collision or other accidents.

The finance companies and dealers look with great favor on the new chattel mortgage law; the only serious questions being the two already pointed out. Some difficulty in the smaller centers has arisen, owing to the necessity of both parties to the contract appearing in person before the notary or local registry office. It is believed, however, that this and other minor difficulties will be overcome as soon as the law becomes more generally known and as instructions are issued concerning its administration.

The increased security to the seller and the greater financing facilities resulting from the law will undoubtedly have a direct effect on automotive sales throughout Chile. It is generally felt that any restrictions by the banks on the credit granted to automobile dealers will be more than counteracted through the provisions of the new law and that the increased financing facilities should result in increased sales during 1930.

AUTOMOTIVE DISTRIBUTION METHODS

Adequate distribution throughout Chile presents a difficult problem to the American exporter. At the present time the problem is handled in two distinct ways: Through a single importer and distributor located in Santiago or Valparaiso and covering the entire country, or through a number of importers and distributors located in the principal distributing centers with a restricted sales territory.

There are advantages and objections to either method, but a division of the territory is undoubtedly the better arrangement. In the discussion which follows the term "distributor" is used to indicate a firm which imports on its own account, has exclusive rights in the territory covered, and appoints its own dealers.

NATIONAL DISTRIBUTION

The majority of American firms handle the distribution of automobiles and trucks through a general distributor, with head offices in either Santiago or Valparaiso. This proves a satisfactory method of distribution, especially where the distributor has his own branch organization in the more important points. It commonly happens, however, that the distributor pushes sales only in sections where he has his own branches, making little effort to secure the proper dealer organization in other parts of the country. Very few firms suitable for handling the representation of automobile lines have direct branches in all the more important centers of Chile; unless a sales organization for supervising the appointment of dealers and sales throughout the country is maintained, there will be no uniformity in the proportion of sales secured in the various districts of the country.

It very commonly occurs that the more complete representation a Santiago or Valparaiso firm has throughout Chile the wider is the variety of products represented. The number of Chilean firms handling automotive products exclusively is not great; none maintains branches in more than two or three centers.

In some instances, of course, the general distributor has built up, at considerable expense and effort, an excellent dealer organization in one or more parts of the country, and his efforts in this direction should be recognized. In such territories as have been neglected or where little assistance is given the dealer, it would be preferable to divide the territory.

After the appointment of dealers, the general distributor's principal assistance is in financing their orders. In some instances the general importer also assists the dealer in supplying spare parts; however, many distributing points are so far from Santiago or Valparaiso and freight rates so high that the distributor is of little assistance in this connection.

In Chile a general distributor is not in a position to relieve firms in other parts of the country of the necessity of carrying moderate stocks or of the difficulties and expense connected with the clearing of shipments. Owing to the very high freight rates, it is wholly impractical for the Santiago or Valparaiso distributors to supply dealers, other than those within a very short distance, with cars from their stock.

There is a difference of opinion among dealers in various parts of the country as to working under a general distributor in Santiago or Valparaiso. Financially strong firms are beginning to feel that the general distributor renders no indispensable service, and that they should receive the latter's commission. On the other hand, many dealers are entirely satisfied with the present arrangement; otherwise, considerable difficulty would be encountered in financing shipments and sales.

The principal advantage to the factory of this system of distribution in Chile is that it deals with a single and generally strong firm, which handles all matters concerning financing shipments, etc., for the entire country. Furthermore, the factory is not faced with the problem of appointing distributors for various parts of the country.

SECTIONAL DISTRIBUTION

The geography of Chile, together with the economic factors, is such as naturally to favor a division of the market into a number of distributing areas, with direct distributors in each. The principal difficulty lies in securing suitable distributors. A division of the territory will, in most cases, result in a more uniform distribution of sales than where sales are handled through a general distributor. The question of further territorial division of the market must be handled with care, however, in order to avoid dissatisfaction on the part of present distributors.

The factors governing the division of the Chilean market vary in each individual case; no division of the market should be made until all factors have been carefully considered. Generally speaking, the division should be made only after a representative of the factory has covered the territory and made a careful analysis. Probably the greatest difficulty lies in securing firms of sufficient financial strength to handle their own importations and retail sales, to say nothing of assisting such dealers as they should appoint. With the increasing activities of American automobile finance companies, however, this problem should be somewhat simplified.

In Chile there are at least eight ports of importance, serving distribution areas, through which importations are made direct. The dealer must maintain sufficient stocks of cars and trucks and replacement parts to supply the needs of the district and handle all details connected with customs clearance. In most cases he must also handle most of the advertising in the district, since national advertising is almost unknown. Frequently he must also appoint and supervise subdealers in the district at considerable expense and effort.

The extent to which the Chilean market should be divided depends on the price class of the car under consideration and the existing distributor organization. In the case of high-priced cars, there is practically no market at the present time outside the central zone; however, such centers as Antofagasta and Concepcion should become small markets in the near future.

By whichever method the distribution in Chile is handled, the territory of Magallanes should be treated as a separate and distinct market from the rest of Chile.

METHODS OF APPROACHING THE PROBLEM

American manufacturers are supervising sales in Chile at the present time by two general methods, direct factory supervision and factory branches.

Manufacturers who supervise the appointment of distributors and sales direct through the factory act either direct through the factory's export department or by means of traveling factory representatives, or both. Ordinarily, little can be done in the way of securing distributors except by the visit of the traveling representative. Occasionally distributors have been secured through correspondence, but a company expecting any substantial volume of business should have his traveling representative make frequent visits to Chile.

Very few factories maintain resident representatives in Chile; in fact, they are seldom necessary, particularly if one is located in Buenos Aires, from which point the factory representative is in a position to make trips to Chile whenever it is necessary. If a resident factory representative is not within easy reach of Chile, however, a visit should be made to the distributor at least annually, preferably semiannually.

Only three American firms, including one with an assembly plant, have factory branches in Chile, all located in Santiago, the principal commercial center of the country and the only logical point for such branches. The present volume of business to be secured by any other companies is generally regarded as hardly sufficient to warrant a permanent organization, at least for some years to come.

The question of local assembly has been much discussed, but there are not in Chile the same arguments in its favor as in a number of other South American countries. In addition to the local assembly plants of American companies in Argentina, Uruguay, and Brazil, some distributors, through arrangement with the factory, are undertaking practically complete assembly. This arrangement has been considered for Chile.

The principal difficulty connected with local assembly in Chile is transportation. Any assembly undertaken in Chile would logically be done in either Santiago or Valparaiso, but sales from a plant at either point would necessarily have to be confined almost entirely to a small section comprising, chiefly, central Chile.

Under the Chilean tariff provisions, which grant a reduction of 30 per cent of the duty if cars are to be completely assembled locally, the saving is not sufficiently great to compensate for the extremely high ocean and rail freight rates. In the case of trucks, where the duty on chassis amounts to only 11 centavos per gross kilo, assembling locally results in only a negligible saving, and although there is a greater saving where passenger cars are assembled, it still is not sufficient under the present duties to warrant shipping cars to northern and southern Chile.

To ship a car or truck from Valparaiso by steamer to any port in Chile costs roughly 60 per cent of the ocean freight rates from New York. Moreover, it is invariably necessary to box the car if it is to be shipped by steamer from Valparaiso, a further increase in cost. Railroad freight rates are considerably in excess of steamship rates, so that any saving in duties is more than lost. Labor costs are substantially less than in the United States, but labor is also generally less efficient.

Dealers who are located any distance from Santiago and who receive cars from the local assembly plant in Santiago report that shipments direct from the United States result in a substantial saving, even though orders must be placed at least three months in advance. Many dealers in the south are receiving part of their requirements from the United States and part from the Santiago plant. In Coquimbo and to the north the entire needs of the dealers are supplied by direct shipment from the United States.

While the volume of sales in the territory which could be served from an assembly plant in Santiago or Valparaiso does not warrant the establishment of additional local assembly plants, it might prove profitable to establish warehouse stocks in Valparaiso for supplying distributors and dealers in the Provinces of Santiago, Aconcagua, and Colchagua and for emergency needs of dealers in other parts of the country.

MOTOR-CYCLE DISTRIBUTION

At the present time American manufacturers of motor cycles are handling distribution through a general distributor for all of Chile. There are a number of firms, particularly in southern Chile, which might be induced to handle American motor cycles as direct distributors but which are not interested in a dealer arrangement. Highway improvements now being made should result in an increase in sales of motor cycles, particularly in the south. A general division of the territory, somewhat on the lines indicated for automobiles, would be advisable.

DISTRIBUTION OF ACCESSORY LINES

The distribution of accessories, replacement parts, and service-station equipment is handled either by direct connections with large wholesalers or through manufacturer's agents, the latter being the more efficient. A few wholesalers have salesmen covering the entire country. A wholesaler in Santiago or Valparaiso is sometimes granted exclusive sales rights simply because he has a sales force covering the entire country; but it frequently happens that in those cities, where the great volume of sale exists, distribution is limited to sales through his own organization, whereas a manufacturer's agent might place the same product with several firms and obtain the maximum of sales.

Generally, manufacturer's agents are given the entire country as their territory. In Santiago, Valparaiso, and a few of the other larger centers, it is customary not to give exclusive sales rights to any one firm; but they are frequently given in the smaller centers, since the number of firms handling these lines is small, and there is not a sufficient volume of business to warrant a number of firms handling the same product. It is usually more satisfactory to confine sales to the larger firms in the principal distributing centers and allow them to secure distribution in the surrounding territory; undue credit risks are thus avoided. The points where such distribution should be secured include Antofagasta, Iquique, and Coquimbo in the north, and Talca, Chillan, Concepcion, Temuco, Valdivia, Osorno, and Puerto Montt in the south.

REGIONAL VARIATIONS OF THE MARKET

In general, the Chilean automotive market can be divided into four general areas, northern Chile, central Chile, southern Chile, and Magallanes; however, separate and distinct sales areas exist in each. The division of the territory in each district depends largely on the type of car or truck being marketed and the distributor connections secured. Even in the division of the major areas, there is some difference of opinion as to the exact division. The automotive distribution areas do not follow exactly the economic areas outlined previously, but the variation is slight.

NORTHERN ZONE

The northern zone, comprising the Provinces of Arica, Tarapaca, Antofagasta, Atacama, and Coquimbo, is the largest zone in Chile and represents approximately 40 per cent of the area of the entire country. The population is sparse in most parts of the zone, however, and represents only 13 per cent of the total Chilean population. The district has approximately 2,842 passenger cars, 1,858 trucks, 288 busses, and 28 motor cycles. The Province of Antofagasta has over 40 per cent of the total of each type.

Except in the Province of Coquimbo, the zone is barren, having practically no vegetation. The prosperity of all the section depends on mining industries. There is agricultural development of some importance in the Province of Coquimbo, but the bulk of its production is shipped to the centers to the north.

Although northern Chile did not show the same increase in sales of automobiles and trucks during 1928 and 1929 as occurred in the central and southern parts, 1928 was the largest sales year on record up to that time and 1929 showed a further increase. The uncertainty as to future developments in the nitrate industry caused a slight slowing up of sales during the closing months of 1929; the decreased activity among the nitrate companies during the first three months of 1930 resulted in a further slowing up of sales, especially in the northern part of the zone. A reaction is almost immediately felt among the automobile dealers in this section of the country when there is any increase or decrease in the activities of the nitrate companies.

In March, 1930, it was considered too early to forecast the year's sales possibilities, but dealers were somewhat disturbed as to the immediate prospects. The nitrate stocks carried over at the close of 1929 were nearly 30 per cent above normal, and it was expected that there would be a reduction in output during 1930. In that event, it was expected that there would be no increase in motor-vehicle sales; in fact, that there would be some reduction.

The Province of Coquimbo is directly affected by conditions in the north, but barring a rather serious curtailment of mining activities during the year, that Province should buy at least as many cars as during 1929.

Passenger cars in northern Chile represent only 12½ per cent of the total in the country, according to the official Chilean registration figures. Most of the roads in the district are very poor; the entire region is utterly barren, and there is little object in driving outside the larger centers. The population of the region is not likely to show any substantial increase, and no very great gain can be expected in passenger-car sales.

Probably 70 to 75 per cent of the sales are of the lowest-priced cars. In a few of the larger centers there are a few sales of cars which would sell in the United States in the vicinity of $1,500, but most sales of other than the lowest-priced makes are of cars in the $1,000 class. Closed cars are not sold to any appreciable extent north of the Province of Coquimbo; they first entered the Province early in 1929, but it was estimated in the early part of 1930 that in the Coquimbo district 20 to 25 per cent of the total sales were closed models.

The demand for trucks has been proportionally better than for passenger cars; approximately 20 per cent of the total truck registrations in the country are shown in this zone. Animals are still used to a great extent as freight carriers, but because of the difficulty in securing forage, the truck offers many advantages. While the roads are not good, there are many sections in the nitrate pampas where a truck can get through even without a road. The largest proportion of truck sales in the district has been of low-priced vehicles, though in the mining centers in the north, 3 or 3½ ton trucks are common, where the roads are sufficiently good to permit their use. Some of the larger companies have improved roads on their property to enable them to haul materials to and from the railroads and in a number of instances are using trucks of even greater capacity.

Bus development in the northern zone has been almost exclusively for city use. Sixteen per cent of the busses registered in the country are located in the northern zone, and north of Coquimbo Province the principal demand during the next few years will undoubtedly be for replacement of worn-out equipment. In a number of localities the bus market has unquestionably been oversold, and operators are finding it extremely difficult, with the competition which exists, to secure sufficient return to meet payments as they come due. There is very little likelihood of any interurban-bus development for some years to come.

Antofagasta is the only point where any important regulations concerning busses are in effect. There they may accommodate not less than 25 passengers. There are no special construction requirements in northern Chile.

There is very little demand for motor cycles in the northern zone. Most American machines sold have had two cylinders.

The percentage of used cars offered as trade-ins varies in different parts of the zone. In the northern four Provinces, Arica, Tarapaca, Antofagasta, and Atacama, 30 to 40 per cent of the new-car sales involve trade-ins, whereas in Coquimbo the average is probably 40 to 50 per cent. Relatively little difficulty is encountered in disposing of the used cars in the north, but in Coquimbo the dealers are apparently having a good deal of difficulty. Used cars are generally considered to have a greater resale value in Antofagasta and some of the northern cities than in any other part of Chile. Very few dealers are able to show a profit on their used-car business, but as few are on the market, the problem is not serious. In some cases the cars are sold in the locality where the trade-in was accepted, but dealers also from time to time ship for sale at interior points.

European competition is of less importance in this district than in the central zone. The selling season is much less pronounced in northern Chile than in any other part of the country, though in the Province of Coquimbo the months from September to May are the best. North of Coquimbo, sales fluctuate in direct relation to the activities of the mining companies, and as there is no rain at all during the year, seasonal changes have little effect on sales.

INSTALLMENT SALES

Between 90 and 98 per cent of all the passenger-car and truck sales in the northern zone are, it is estimated, made on time. The terms granted on low-priced cars follow in a general way the standard terms of the finance companies, but it is generally reported that for cars of slightly higher price a year more is granted. The finance companies operate little in this region. The dealers attempt to secure one-third down, but frequently accept substantially less, allowing a credit period for both cars and trucks of 15 or 18 months. In the majority of cases, dealers who finance their own sales make an interest charge of 1 per cent a month.

Repossession is seldom necessary, for business integrity in the southern part of the zone is particularly high. It is not uncommon for purchasers to disregard the due dates on drafts attached to an installment-sale contract; but they rarely default, even though a week or so late in making payment. Protesting a draft is, therefore, to be avoided if possible; in fact, it would result in serious damage to the reputation of the firm if the individual were in good financial condition.

DISTRIBUTION CENTERS

The northern zone of Chile can probably be most effectively handled by a division of the territory into three distribution areas. The most northerly of these, and the least important, includes the Provinces of Arica and Atacama, in which Iquique is the principal distributing center. The second and most important includes the Province of Antofagasta and the northern half of Atacama Province. The principal distributing point is Antofagasta. The southern half of Atacama Province and the Province of Coquimbo comprise the third.

Antofagasta (*Antofagasta*).—Antofagasta is the second most important port in Chile, with the third largest market for automotive products. Its population is estimated at 61,000. It serves as a distributing center for an important mining district, the products of which include nitrate, copper and borax. It is essential that representation be secured for low and medium priced cars; even some of the higher-priced cars should be represented in some form.

Iquique (*Tarapaca*).—Iquique, the second most important distributing center in northern Chile, has a population of nearly 40,000; it serves an important nitrate and copper producing region.

Coquimbo-La Serena (*Coquimbo*).—La Serena, the capital of the Province, and Coquimbo, the only port of importance, should be considered as a unit in automotive distribution. Located about 10 miles apart, they are connected by rail and bus services. The combined population is about 35,000. Representation in either is sufficient to cover both; in fact, there is not a sufficient volume of business in either, except possibly in one or two of the lowest-priced makes, to warrant a separate sales organization. Coquimbo is primarily a business and shipping center; La Serena is largely residential. There has been considerable agricultural development in the region, and production of copper is important.

Tocopilla (*Antofagasta*).—Tocopilla is located about midway between Iquique and Antofagasta. It has an estimated population of 6,000; it is an important shipping and distributing point for a rich nitrate and copper section. Tocopilla, like most parts of Antofagasta Province, offers a particularly good market for trucks. Low-priced cars and trucks should be represented there.

Chuquicamata (*Antofagasta*).—Chuquicamata, located at an elevation of 10,600 feet, with a population of about 13,000, is a mining town created by the development of American copper properties. A large part of the purchasing by the mining interests is done direct, but there should be some sort of dealer organization for handling individual sales in Chuquicamata and in Calama, a small railroad junction near Chuquicamata. Representation at either point could cover the two cities satisfactorily. The appointment of a dealer in either place should be handled by the Antofagasta distributor.

Ovalle (*Coquimbo*).—Located southeast of Coquimbo and with a population of approximately 10,000, Ovalle serves an agricultural section of some importance. It is the second most important point in the Province; representation of low-priced cars should be arranged there.

Arica (*Arica*).—Arica is the only point in the Province of Arica of importance for automotive distribution. The population is approximately 11,000. It is a shipping point of some importance, both for the territory which it serves and for international shipments to Bolivia. It should be included in the territory of the Iquique distributor, but shipments should be made direct. Low-priced cars should be represented there.

Copiapo (*Atacama*).—Copiapo, located about midway between Antofagasta and Coquimbo, is the most important center in the Province of Atacama. The population is estimated at slightly under 10,000; it is principally a mining center, though there is some agriculture in the immediate vicinity. Copiapo is practically on the dividing line between Antofagasta and Coquimbo districts and may be included in either, depending on the connection of the distributor at either point. Shipments should be made through Caldera.

Vallenar (*Atacama*).—The estimated population of Vallenar, located in the south-central part of the Province of Atacama, is 7,000. It is the second most important distributing center in the Province and should be included in the territory of the Coquimbo distributor.

Pisagua, a port in the northern part of Tarapaca Province, Chanaral, the principal port of Atacama Province, and Illapel, in the south-central part of Coquimbo Province, are all of minor importance but are the principal centers in northern Chile which have not been previously mentioned and which are worthy of consideration for the representation of the lowest-priced cars and trucks. Pisagua should be included in the territory of the Iquique distributor. Chanaral in the Antofagasta district, and Illapel in the territory of the La Serena or Coquimbo distributor.

CENTRAL ZONE

The central zone of Chile comprises the three Provinces of Aconcagua, Santiago, and Colchagua. While this zone includes 39 per cent of the entire population of the country, it comprises only 7 per cent of the total area. It is the principal industrial section of

Chile; agriculture is also of considerable importance, and there is some mining development. It includes both Santiago and Valparaiso, which, with the adjoining municipalities, form two of the most important individual markets in Chile. The district has 14,082 passenger cars, 6,229 trucks, 888 busses, and 286 motor cycles. More than two-thirds of each class are in Santiago Provinces.

Registration figures for the three Provinces comprising the central district show that approximately 61 per cent of the passenger-car sales, 65 per cent of the truck sales, 72 per cent of the bus sales, and 70 per cent of the motor cycle sales have been in this zone.

Sales of all automotive products reached their peak in 1929; practically all companies expected a further increase in 1930. There is a feeling among a few dealers, however, that too great credit allowances have been granted and that in some lines the market has been oversold. While it is true that unwise credit terms have been granted, there is now a noticeable tendency toward a more sound basis. The activities of the finance companies are having a favorable influence in this respect.

One disturbing factor in the market at the commencement of 1930 was the large stocks in the hands of some dealers—a situation most acute for some dealers handling low-priced cars. In some cases, but not generally, there had been overordering of cars in the medium-priced class. Stocks of high-priced cars were about normal.

Passenger-car sales held up well in all lines during the first three months of 1930, the closing months of the summer season. A few dealers in Santiago in medium and high priced cars experienced some slowing up of sales during January and February, but these classes generally maintained a highly satisfactory sales volume. Such slowing up as occurred was probably due more to the fact that many purchasers of these types of cars had left the city for the various shore resorts than to any general restriction in buying. In Valparaiso, it was reported that the number of summer visitors in the neighboring resorts was exceptionally large, which in itself indicates a generally prosperous condition. Sales in Valparaiso during these months held very strong.

The closed car has made very rapid progress in this district. It was estimated at the first of 1930 that at least 70 to 75 per cent of the total passenger-car sales were of this type. In the medium and high priced cars, 90 to 95 per cent of the sales are of closed models. The demand for open cars of these price classes in Santiago is particularly small, and dealers who have a number of open cars in stock are having great difficulty in moving them.

Taxicab drivers make up the majority of purchasers of open cars. Low-priced cars are principally in demand by this group, and as there is a marked difference in prices between the open and closed models, the former naturally have the largest sale. During 1929 there was a slight trend toward the more expensive types, but even in these open cars were generally purchased. It is expected that when a change commences toward the closed car among this group of buyers, it will be very rapid.

The principal demand in Chile for roadsters and coupés is in Santiago and Valparaiso. During the closing months of 1929 and the early months of 1930, an increase in sales was noted, particularly in the coupé model. As the roads throughout the country are improved, it is expected that there will be a further increase in sales of this type, as salesmen will cover more and more of their territory by automobile.

The demand for high-priced cars in Chile is confined almost exclusively to the central zone, largely to Santiago and Valparaiso and adjoining municipalities, and probably 80 or 85 per cent of the market for cars which sell in the United States at over $1,500 is in the central zone. This extremely uneven division of distribution may be expected to decrease as progress is made in Chile's highway program.

Early in 1930 a new development occurred in the passenger-car field. Two companies established regular passenger-car services between Santiago and Mendoza in Argentina. While the road conditions are not good, the trip can be made in the summer without undue difficulty. The scheduled running time was 18 hours, roughly 2 hours more than required to make the trip by train. To make the trip in a single day is very hard on the passenger, and provision was made for breaking the trip by an overnight stop. A number of trips were made, but the services will, of course, have to be discontinued as the winter season approaches. While it will probably be some time before there is any great amount of automobile traffic between Santiago and Mendoza, the establishment of this service indicates the possibilities of passenger-car and bus services for interurban use.

Although there is probably not the same possibility for developing truck sales in the central zone as in some other parts of the country, the outlook is good. Both Santiago and Valparaiso have regulations providing for the gradual withdrawal of horse-drawn vehicles from the streets in the center of the city, which will, of course, result in additional sales of trucks.

The heavier trucks have made far greater progress in the central district than in other parts of the country. While there was at one time a good demand for trucks with a capacity of 4, 5, or 6 tons, there appears to be a tendency to replace them with models not exceeding 3½-ton capacity. Sales of trucks with a capacity between 1¾ and 3½ tons have shown a very marked increase, and there appears to be a movement toward that type instead of trucks with a capacity of 1 or 1½ tons. This tendency is much more pronounced in the cities of Santiago and Valparaiso than in the other parts of the territory.

Some authorities feel that a pronounced overexpansion has occurred in the truck market in both Santiago and Valparaiso, and that at the present time competition among individuals operating general hauling services is so great that it will not be long before difficulty will be encountered in meeting payments. It has been estimated that the minimum charge for hauling by truck with a satisfactory profit is 25 pesos ($3) a ton-mile. Because of the existing competition, however, no operator is securing this amount; in most cases, in fact, very much less. Purchasers of trucks during 1929 will, a few dealers fear, be unable to continue monthly install-

ments after the truck reaches the point where large outlays for major repairs and renewal of tires are necessary. Most dealers, however, do not entertain this fear.

Very few sales are now made of the high-priced trucks of low capacity rating, but there is a gradual movement in that direction. The original cost is generally a determining factor and largely restricts sales of trucks under 1½ tons to two or three well-known, low-priced makes.

More than three-fourths of the busses in the entire central zone are operating in either Santiago or Valparaiso. The number operating in both centers has grown remarkably during the past few years. As a result of the Santiago bus regulations now in force, it is estimated that of the slightly over 700 units in operation, at least one-third will be renewed during 1930. Some estimate that as many as one-half of those in circulation will be replaced during the year, but, in any event, it seems probable that there will be a sale for at least 200 units in Santiago alone. The unit value of busses sold will show a substantial increase because of the municipal regulations as to wheel base. It was estimated that approximately 80 per cent of the busses in circulation at the close of 1929 did not conform with the municipal regulations, and it is believed that during 1930 and 1931 there will be a sale for over 500 busses for replacement alone in Santiago.

The outlook in Valparaiso also indicates a normal increase in bus sales during 1930, and during the next two of three years a substantial growth in the sale of busses for interurban use should develop. The central zone is the district in which the most rapid progress in road building is being made, which should hasten this development.

The rainy season in the central zone is most pronounced during June, July, and August, the winter months, and, under normal conditions, sales are slowest at that time. Sales improve rapidly after the 1st of September, which is usually one of the best months of the year, and continue good through October and November. Sales of passenger cars are frequently somewhat slower in December, but generally January, February, and March are excellent months. Truck sales are generally best from October through March, and there is less variation during the summer season from month to month than is the case of passenger cars. There is less fluctuation in the seasonal demand in the cities of Santiago and Valparaiso than in the rural districts. Except along the coast, any rain, even showers, is very uncommon from about the middle of October to the middle of April.

USED CARS

While the used-car problem is more pronounced in the central zone than in other parts of the country, it has not reached the point where it is having any serious effect on new-car sales. As in other South American countries, there is not the same market possibility for used cars in Chile that exists in the United States. The division in purchasing power of various classes in Chile is very sharp, and there is not the market among the laboring classes that exists in the United States. The laboring classes and clerical employees in minor positions are paid on a much lower scale than in the United States, and as automotive products cost at least twice as much, there is little prospect of these classes becoming potential purchasers of even used cars for many years to come.

It is estimated that nearly 50 per cent of the new-car sales in the central zone involve trade-ins. This percentage would be unimportant were it not for the fact that the demand for used cars is very small. There is much less difficulty in disposing of low-priced than medium-priced and high-priced used cars, since the prices of the latter are about equal to, or above, the prices of new low-priced cars. The average purchaser prefers a low-priced new car rather than a higher-priced used car costing approximately the same amount.

With few exceptions, dealers have been cautious in accepting used cars as trade-ins; they generally have not made unreasonable allowances. A number of firms definitely restrict the number of used cars in stock and grant special commissions to salesmen in order to keep them moving. There is, of course, the danger that if sales should slow up to any appreciable extent, unwise trading might develop in order to move the new-car stocks. One or two firms in the central zone were thus involved during 1929.

There are not more than two or three firms in the entire district which handle used cars exclusively. Dealers invariably report that only in exceptional cases are they able to dispose of them at a profit; in fact, they consider theemselves fortunate if they realize the amount allowed on the car. A number of dealers keep losses to a minimum by repainting and reconditioning used cars.

INSTALLMENT SALES

Approximately 90 per cent of the total sales in the central zone are on time. The figure runs higher for low-priced than for more expensive cars. Two or three dealers handling cars which sell in the United States at above $2,000 report that 60 to 70 per cent of sales are for cash.

Firms in the central zone usually follow very closely the standard terms of the automobile finance companies. One or two companies, however, grant considerably more time in the case of bus sales, frequently two years or more.

The time granted in motor-cycle sales by representatives of American companies follows very closely that of passenger cars, but a number of European motor cycles have been sold with no down payment whatever.

DISTRIBUTION CENTERS

Distribution in the central zone of Chile may be handled from either Santiago or Valparaiso, if the head office of the distributor is located in one and a branch in the other. Otherwise, the territory should be divided into two sales areas, one including the Province of Aconcagua and the other including the Provinces of Santiago and Colchagua. The major distribution centers in the central zone follow:

Santiago (*Santiago*).—The capital of Chile, Santiago, is by far the country's most important commercial and industrial center.

The population of Santiago, together with Nunoa and Providencia, its suburbs, was estimated at 594,589 on June 30, 1927. Approximately 60 per cent of the passenger cars and 50 per cent of the trucks and busses of central Chile are in those three municipalities.

Valparaiso (*Aconcagua*).—Valparaiso, the second largest city in Chile, is the most important port. Its population, together with that of Vina del Mar, which adjoins Valparaiso and is essentially a residential city, is estimated at 232,568. Practically all purchasing of residents of Vina del Mar is done at Valparaiso. The latter lost ground somewhat during the past few years in relative importance as an industrial center; automotive registrations have held at approximately a constant figure during the past two years. They have grown rapidly, however, in Vina del Mar and are now practically equal to those in Valparaiso. The combined figures for the two municipalities show approximately 10 per cent of the total passenger-car and truck registrations in the central zone and 22 per cent of the total bus registrations.

Rancagua (*Colchagua*).—Rancagua, the capital of the Province of Colchagua and the third most important distributing center in central Chile, has a population estimated at nearly 21,000 and warrants representation of some form, preferably through a dealership under the Santiago distributor. The city serves an important mining and agricultural region.

San Fernando (*Colchagua*).—San Fernando, located in the south-central part of the Province of Colchagua, has an estimated population of 11,500. It is of nearly equal importance to Rancagua and is located in an agricultural and mining section growing in importance.

Melipilla (*Santiago*).—Melipilla, located southwest of Santiago and with an estimated population of 6,200, serves as the distributing center for a moderately large area. It is the only important point in the Province, aside from the capital, as a distributing center at the present time.

Quillota (*Aconcagua*).—Located northeast of Valparaiso, Quillota has a population of approximately 50,000. It has the second largest number of motor vehicles registered in the municipalities of the Province.

San Felipe (*Aconcagua*).—Though fewer cars are registered in the municipality of San Felipe than in Quillota, it is of equal if not greater importance as an automotive distribution center. It is located in the central valley in a region of growing agricultural importance. The estimated population is slightly over 12,000.

Rengo (*Colchagua*).—Located approximately midway between Rancagua and San Fernando, Rengo ranks as the third distributing point in Colchagua Province. It is located in an agricultural and wine-producing section and has an estimated population of approximately 7,000.

Los Andes (*Aconcagua*).—Los Andes is the least important of the distribution centers in the central zone. It is principally a railroad center, though there is some agriculture in the section. It is located sufficiently near San Felipe that sales can, in a number of instances, be satisfactorily handled from the latter point.

SOUTHERN ZONE

Southern Chile includes the eight Provinces lying south of Santiago and Colchagua. The coastal range is much less pronounced; the Andes decrease in height toward the south. The fertile valleys widen all the way south to Puerto Montt, the southernmost point of any importance in the zone. It is the principal agricultural section of Chile. Livestock and timber are also important products, and in a few centers there is some industrial development. The principal mining in the region is of coal, which, for the most part, is of low grade. The southern zone represents 30 per cent of the area of the entire country and 47 per cent of the population. It has 5,190 passenger cars, 1,214 trucks, 222 busses, and 67 motor cycles.

Southern Chile has been the slowest zone to develop as an automotive market. Excellent progress, however, was made during 1928 and 1929, and there is now every reason to believe that the greatest future development will occur there. The steady progress being made in agricultural development and in road building is having a marked influence on general economic conditions in this part of the country. The lack of improved roads has undoubtedly been the principal factor in retarding automotive sales; until recently all roads in southern Chile were impassable during the rainy season.

In the northern part of the zone rains commence in May or June and extend to the end of August or early September; farther south they begin earlier and continue later. During the past two years, great improvements have been made in the roads, and as further progress is made in Chile's road-building program, further increases in vehicle sales should result.

Approximately 23 per cent of the total passenger-car registrations in Chile are in the southern zone. The market for cars selling in the $2,000 class is extremely small throughout the district; except in Concepcion, only isolated sales have been made. Sales of low-priced cars have shown an unusually heavy ratio, probably representing 75 to 80 per cent of the total. The ratio has been much smaller in such centers as Concepcion, Talca, and Temuco, where the sale of medium-priced cars has been moderately good. In the small centers and county districts cars of the $1,000 class and up have begun to enter only since 1928.

The demand for closed cars varies with the locality. In the less important centers, where sales are largely confined to the lowest-priced cars, the difference in price between open and closed models naturally restricts the sales of the former. A very marked increase in sales of closed cars occurred in 1929; where there is no considerable difference in price between closed and open models, there is now a strong preference for the former. In the whole district probably 80 to 90 per cent of the sales of medium-priced cars are of closed models, while not over 40 or 45 per cent of low-priced cars are closed.

The development of truck sales has been particularly slow in southern Chile, largely as a result of poor road conditions. According to official registration figures, only 12 per cent of the trucks in Chile are in use there.

A noticeable increase in truck sales occurred in 1928. The closing months of the year and the early months of 1929 witnessed great

development. Oxen are still used to a great extent in the agricultural sections, but improvements in roads are doing much to replace them with more rapid types of transportation.

Except in the larger centers, only the lightest trucks have been sold, owing to road conditions and to the expense, but in some districts trucks of over 2-ton capacity are prohibited from using bridges. The price factor is likely to restrict the truck sales in country districts to the lightest models for the next two or three years, but in the larger centers trucks up to 3 or 3½ tons capacity are commencing to make considerable progress.

The bus development in southern Chile has been confined almost exclusively to the larger centers, Valdivia, Concepcion, and Talca. Although only half the size of Concepcion, Valdivia, with no street cars, has twice the number of busses. Bus registrations in the southern zone represent 12 per cent of the total in Chile. There has been very little use of busses in interurban services. With the rapid progress now being made in highway improvement, however, substantial gain in sales of busses for this use may be expected. The southern zone is well provided with rail connections, but in many parts the service is infrequent; bus services between the more important towns would undoubtedly prove profitable. Closed or semiclosed types of busses are used throughout southern Chile, but, except in the larger cities, the construction of bodies is rather crude.

Motor-cycle sales have been small throughout the district, but better than in northern Chile. Sales in no one center have been large, though Concepcion and Valdivia offer the best markets. Road conditions outside of the cities have not, up to the present time, been such as to favor the use of motor cycles.

In the northern part of the zone the selling season is considerably longer than in the southern part. The best sales months in the northern Provinces of the zone are from September to about the 1st of April. In Concepcion and the balance of the central section, the best selling season is from October to February. The selling season in Chiloe Province is confined principally to January and February.

USED CARS

The used-car problem is generally less serious in southern Chile than in the central zone; it exists chiefly in the larger cities. In some centers, particularly the smaller places, dealers decline to handle used cars except on consignment—a practice rapidly disappearing. Although dealers generally have been conservative in allowances on trade-ins, yet owing to a small demand for used cars, they almost invariably result in some loss.

The large increase in sales during the past year or two will unquestionably result in a corresponding increase in the number of trade-ins during the next few years. The life of a car in southern Chile has been very short in the past because of the condition of the roads, but the improvement in this situation which is now taking place will give cars a longer period of usefulness and doubtless increase the used-car problem.

INSTALLMENT SALES

The ratio of cars sold on time varies in different parts of southern Chile. Roughly 90 to 95 per cent of the sales throughout the zone are on the installment plan, but in the extreme south the percentage of cash sales runs higher. The initial payment generally runs lower in the southern part of the zone than the minimum required by finance companies. While dealers generally attempt to secure one-third as the initial payment, the average accepted probably does not run over 25 per cent.

Payments are generally allowed to run 12 months for passenger cars and 18 for trucks, but there is a tendency in some parts, notably around Chillan and Concepcion, to allow 18 months for both. In the Provinces of Valdivia and Chiloe, the time given on cars and trucks is often somewhat shorter than that approved by the finance companies.

The finance companies located at Santiago have only recently begun to extend their activities to the southern zone, and in view of the increasing volume of sales throughout the territory, dealers have found it more difficult to handle the financing of both shipments and retail sales. Some dealers feel that the installment payments should be divided in such a way that only very small installments come due during the winter months, when it is frequently impossible to use a car. This is particularly applicable in the case of trucks, which are used either on the farms or for general hauling in the cities. Operators secure the principal returns on their investment during the summer and harvest seasons and are able to make larger payments at that time. It is felt that such an arrangement would materially facilitate the expansion of the finance companies' operations.

DISTRIBUTING CENTERS

The division into sales areas is more difficult in the southern territory than in northern and central Chile. The southern zone can probably be best handled by a division into five areas, the exact limits of any one area depending somewhat on the individual circumstances surrounding the representation of a particular product. The following division is given with the knowledge that it will serve not entirely as an accurate guide for all types of cars and trucks, but as a general division which should be borne in mind.

Commencing in the north, the suggested divisions are the Talca district, which comprises the Province of Talca and the northern half of the Province of Maule; the Chillan district, comprising the Province of Nuble and the southern half of the Province of Maule; the Concepcion district, including the Provinces of Concepcion and Bio-Bio; the Temuco district, comprising the Province of Cautin; and the Valdivia district, which includes the Provinces of Valdivia and Chiloe. The primary and secondary distribution centers of the entire zone are indicated below.

Concepcion (*Concepcion*).—The population of Concepcion is estimated at nearly 70,000; it is the largest city south of Santiago and the third largest in Chile. It is in a rich agricultural section, and there is considerable industrial activity in the city and in the neigh-

boring towns. Talcahuano, the port of Concepcion, is growing rapidly and has a population of approximately 25,000. Up to the present time all automotive sales have been handled in that city by dealers in Concepcion. Talcahuano is 9 miles from Concepcion and an excellent hard-surfaced road connecting the two was completed in the early part of 1930. Practically all of the imports of automobiles for the Provinces of Maule, Nuble, Bio-Bio, and Cautin enter through the port of Talcahuano. Automobile sales and the appointment of dealers throughout the Provinces of Concepcion and Bio-Bio can best be handled through a distributor in the city of Concepcion. In some instances, it will possibly be advisable to include the Chillan district in territory of the Concepcion distributor.

Talca (*Talca*).—Talca, with a population of approximately 35,000, is in the center of a rich agricultural belt; it is the most important distributing center between Santiago and Concepcion and is steadily growing in importance. A temporary setback was encountered in the general economic situation of the city itself, when, in December, 1928, a very serious earthquake did great damage in the city. There is some industrial development in Talca, and there is every reason to believe that the city will become one of the more important distributing centers of Chile within a few years. A distributor in Talca should be able to handle the Province of Talca and the northern half of Maule Province. Shipments for Talca are generally received through Valparaiso, though a few enter at Constitucion.

Temuco (*Cautin*).—Temuco has a population of approximately 35,000 but serves an area with a population of at least 50,000. Nearly 20 per cent of the population of the Province are Indians of the Araucanian tribes. While they are industrious, their purchasing power is negligible. Temuco is situated in the heart of a rich agricultural and timber belt. It is by far the most important commercial center in the Province, and distribution throughout the Province can be satisfactorily handled from that point.

Osorno (*Valdivia*).—Osorno, the fourth largest market for automotive products in Chile, serves a very rich agricultural and grazing section of the southern part of Valdivia Province. Its population is estimated at approximately 15,000, but the area it serves has at least twice that number. Because of the importance of Osorno as an automotive market, a separate distributor, according to some dealers, should be placed there to handle sales and the appointment of dealers throughout the southern part of Valdivia Province and the Province of Chiloe. Even more satisfactory results would probably be obtained if a separate distributor were appointed in Valdivia to handle the northern part of the Province, since there is no direct connection or dependence between the two cities. Shipments to Osorno are made through Valdivia. Roads in the vicinity of Osorno are among the best in southern Chile.

Curico (*Talca*).—Curico, with a population of approximately 15,000, is located in an agricultural section entirely separate from that around Talca. Shipments of automotive products are generally made through Valparaiso. Representation of low and medium priced cars is advisable at Curico; it should generally be included in the territory of the Talca distributor. It is located in the northern part of the Province and serves a large part of that section.

Valdivia (*Valdivia*).—The population of Valdivia is estimated at approximately 33,000; it is a progressive commercial center. There is a strong German element in the city and in other parts of the Province. The automotive development in the city has been slower than in many other parts of southern Chile, largely because there have been no roads leading out of the city. Work is now under way on a highway from Valdivia to La Union, which will do much to develop the automotive market and to widen Valdivia's importance as a distribution center throughout the Province. As practically all automotive shipments for the various centers in Valdivia Province and Chiloe enter through Corral, the port of Valdivia, it appears logical to include both Provinces in the territory of the Valdivia distributor. When the road to La Union is completed, it will be possible to make delivery over the road at least as far as Osorno. Agricultural products and lumber are important products of the district, and Valdivia itself ranks as one of the most important manufacturing centers in Chile.

Chillan (*Nuble*).—Chillan is the capital of the Province of Nuble and has an estimated population of 30,000. It serves as a distributing center for the entire Province as well as the southern half of the Province of Maule. It is located in a rich agricultural and grape-growing section. Lentils make up one of the most important crops; any fluctuations in production directly affect the prosperity of the section. There was a partial failure of the 1929–30 crop, which resulted in a slowing up of sales of automotive products during the early months of 1930. The situation as regards the other crops of the district was, however, satisfactory, and it is not believed that there will be any decline in the total volume of business done during the year. Considering the size of the city and the district it serves, the development of the automotive market has not shown the proportional increase which might be expected. Roads in the district have been very poor, but steady progress in improvement is now being made, and a marked increase in sales should result during the next two or three years.

SECONDARY DISTRIBUTION CENTERS

There are a number of distributing points in which the representation of cars and trucks of the lower-priced classes should be had. The more important of these are indicated below:

Los Angeles (*Bio-Bio*).—In Los Angeles, the second most important distributing point in the Concepcion district, it is important that low-priced cars should be represented. Agriculture and lumber are the principal industries of the district.

Molina (*Talca*).—Molina is located in the northern part of the Province of Talca. Because of its proximity to Curico, a moderately large part of the sales of other than the lowest-priced cars are handled from that center. The low-priced cars should, however, be represented in Molina, which should be included in the territory of the Talca distributor.

Victoria (*Cautin*).—Victoria, in the north-central part of the Province of Cautin, has an estimated population of 6,000. It should be included in the territory of the Temuco distributor.

Linares (*Maule*).—Linares, a city of 12,500, is a moderately important distributing point in a rich agricultural section. It is located in the north-central part of the Province of Maule and should generally be included in the territory of the Talca distributor.

Traiguen (*Cautin*).—Traiguen serves an agricultural section approximately east of Victoria and is located in the northern part of the Province of Cautin. The population is estimated at 8,500, and representation of low-priced cars should be provided there under the supervision of the Temuco distributor.

Puerto Varas (*Chiloe*).—Puerto Varas offers the largest automotive market in the Province of Chiloe, though in many ways it is less important commercially than Puerto Montt, the capital. There is considerable agriculture in the region, potatoes being one of the principal crops. It is located in the southern part of the Province on the shores of Lake Llanquihue, noted for its scenic beauty, and is increasing annually in importance as a summer resort. A separate dealer should be appointed in Puerto Varas, as a dealer in Puerto Montt is unable satisfactorily to cover the community. Puerto Varas should be included in the territory of the Osorno or Valdivia distributor.

Cauquenes (*Maule*).—Cauquenes, located in the southeastern part of the Province of Maule and with a population of a little less than 11,000, serves the rather large agricultural section; it should be included in the territory of the Chillan distributor.

Parral (*Maule*).—The population of Parral is approximately 10,000, and it is the third most important distributing point in the Province of Maule. The section it serves is developing rapidly, and before many years Parral will undoubtedly surpass Cauquenes in importance as a distributing point. It should be included in the territory of the Chillan distributor.

Angol (*Bio-Bio*).—Angol, located in the south-central part of the Province of Bio-Bio, has a population of approximately 10,000. It is the second most important distributing center in the Province and should have representation of low-priced cars. It should be included in the territory of the Concepcion distributor.

Puerto Montt (*Chiloe*).—Puerto Montt, the capital of the Province of Chiloe, is the principal port and commercial center. It has a population of approximately 12,000 and has a rather important coastwise trade. The automotive market has only recently begun to develop. Up to a year or two ago the roads outside of the city itself were impassable for all but about two months of the year. Representation of low and medium priced cars should be provided, but generally a dealer there can not cover satisfactorily the territory surrounding Puerto Varas. Puerto Montt should generally be included in the territory of a distributor in Osorno or Valdivia.

In the various sales districts of southern Chile, there are a number of points at which representation for the lowest-priced cars should be secured. In the Talca district, San Clements and San Javier, located in Talca and Maule Provinces, respectively, are the most important. San Carlos, Yungay, Bulnes, and Itata, all in the Province of Nuble, are the most important centers in the Chillan district. The more important centers in the Concepcion district are Lota and Coronel in Concepcion Province and Mulchen and Collipulli in the Province of Bio-Bio. Lautaro and Nueva Imperial, both in the Province of Cautin, are the more important centers in the Temuco district. Rio Bueno and La Union in Valdivia Province and Frutillar are of some importance as distributing points in the Valdivia district.

MAGALLANES[2]

The Territories of Aysen and Magallanes may be included in the territory served from the city of Magallanes. Magallanes also serves as a distributing center for that part of the Argentine Patagonia lying south of the River Deseado, which is approximately twice the size of the Territory of Magallanes. The Territory of Aysen is of practically no importance in automotive distribution.

The Territory of Magallanes consists of rolling prairies; roughly 30 per cent of the population is foreign born. Sheep raising is the basic industry, and wool and sheepskins are the chief export items. Undressed furs, principally of hare, guanaco, and fox, are of some importance. With the exception of the lumber industry, coal (lignite) mining, small machine shops, and shipping yards, which are only of local importance, there are no other industries of any consequence in the Territory. The entire district has 786 passenger cars, 212 trucks, 4 busses, and 28 motor cycles.

There are no railways, with the exception of two short industrial lines, and automotive vehicles have become an important factor as a means of communication among the vast network of sheep ranches. There are infrequent but fairly regular steamship services from New York to Magallanes, but freight is also routed with transshipment at Valparaiso or Talcahuano, the port of Concepcion. It requires from 30 to 50 days for merchandise to reach Magallanes from the United States, and as the port is an open roadstead, necessitating the discharge of cargo by means of launches or lighters, particular care should be exercised in packing, particularly if goods are to be forwarded with transshipment. In making shipments to Magallanes, as in other parts of Chile, both the gross and net weight should be shown in kilos.

No duties are assessed on automotive vehicles imported into the Magallanes district under the present Chilean tariff. There is, however, a high protective tariff on leather, and under a customs ruling, articles of leather, or articles not of leather but containing leather or artificial leather containing animal fiber, pay duties as if the entire article were made of leather. All upholstery made of leather or artificial leather containing animal fiber, which is classed as leather, should be removed from the automobile before it is shipped and packed in a separate case.

Considering the sparse population in the Territory, which represents only approximately 1 per cent of the population of Chile, it has been a relatively large automotive market. Approximately 3½ per cent of the total passenger-car registrations in Chile are in the Territory of Magallanes. The ratio of passenger cars to trucks, however, is nearly 4 to 1.

There was some increase in the sale of passenger cars in 1928 and 1929, but not the same percentage of increase as in other parts of

[2] Based principally on reports of American Vice Consul John T. Garvin.

the country. Because of the slow economic development in the region, the growth in demand for passenger cars is likely to be less than in the rapidly progressing agricultural regions of the country. The wealth of the district is very unevenly divided, and a large proportion of the potential purchasers already have automobiles.

Approximately 70 per cent of the total passenger-car sales are of the lowest-priced models. There is practically no sale whatever for cars valued at over $1,000. The used-car problem does not exist to any extent; thus far there has been no serious difficulty in disposing of those accepted as trade-ins.

The proportion of closed cars sold in the Magallanes district at the present time is estimated at between 85 and 90 per cent of the total.

Roughly 2 per cent of the total registrations of trucks in Chile are in the Territory of Magallanes. Approximately 85 per cent are of two well-known, low-priced, light American trucks. The truck is gradually replacing the ox cart and is generally used by the larger sheep raisers for bringing wool to Magallanes and some of the south Argentine ports for shipment.

There are only four busses registered in the entire Territory of Magallanes and none in Aysen.

Practically 80 per cent of the motor cycles sold in Magallanes have been of American manufacture, but the market is, of course, small. No very pronounced growth in the demand can be expected within the next five or six years.

The city of Magallanes is the only important distributing center in the entire section. The imports through that port are not an indication of the exact market which exists in the Territory, since a moderately large proportion of the cars are sold in the adjoining parts of Argentina. A very few cars have been sold in Porvenir, across the Strait of Magellan on the island of Tierra del Fuego. Representation of the low and medium priced cars is desirable in Magallanes. The annual imports through Magallanes have averaged between 100 and 150 units a year for passenger cars and trucks combined.

O

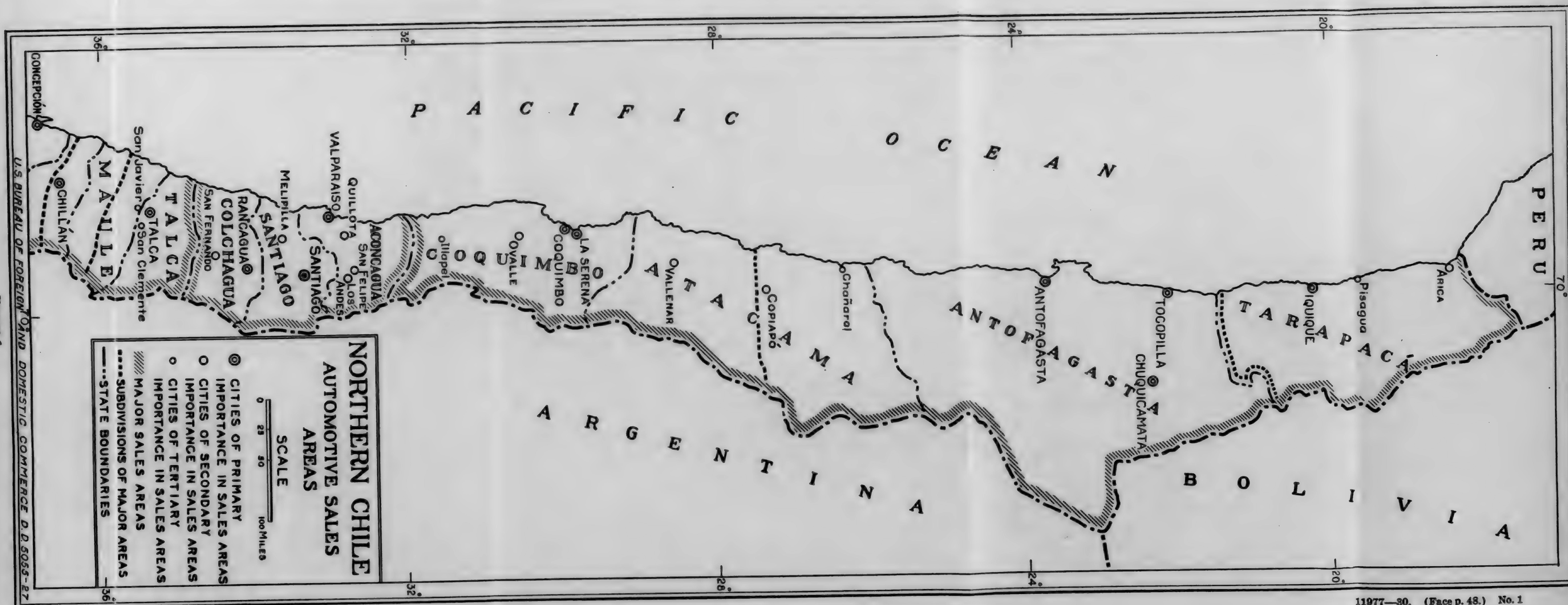

NORTHERN CHILE
AUTOMOTIVE SALES AREAS
SCALE
0 25 50 100 MILES
CITIES OF PRIMARY IMPORTANCE IN SALES AREAS
CITIES OF SECONDARY IMPORTANCE IN SALES AREAS
CITIES OF TERTIARY IMPORTANCE IN SALES AREAS
MAJOR SALES AREAS
SUBDIVISIONS OF MAJOR AREAS
STATE BOUNDARIES
PACIFIC OCEAN
ARGENTINA
BOLIVIA
PERU
MAULE
TALCA
COLCHAGUA
SANTIAGO
ACONCAGUA
COQUIMBO
ATACAMA
ANTOFAGASTA
TARAPACA
CONCEPCIÓN
CHILLÁN
San Javier
TALCA
San Clemente
San Fernando
RANCAGUA
MELIPILLA
SANTIAGO
VALPARAISO
QUILLOTA
LOS ANDES
SAN FELIPE
Illapel
OVALLE
COQUIMBO
LA SERENA
VALLENAR
COPIAPÓ
Chañaral
ANTOFAGASTA
TOCOPILLA
CHUQUICAMATA
IQUIQUE
Pisagua
ARICA
36°
32°
28°
24°
20°
70°
U.S. BUREAU OF FOREIGN AND DOMESTIC COMMERCE D.D. 5055-27

FIGURE 1

REDUCTION
RATIO
16:1

2.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

2.0 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890

1.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890

PM-MGP 13"x18"
METRIC GENERAL PURPOSE TARGET
PHOTOGRAPHIC

200 mm

150 mm

100 mm

1.0 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz1234567890

1.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz1234567890

2.0 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890

2.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890

A5

A4

A3

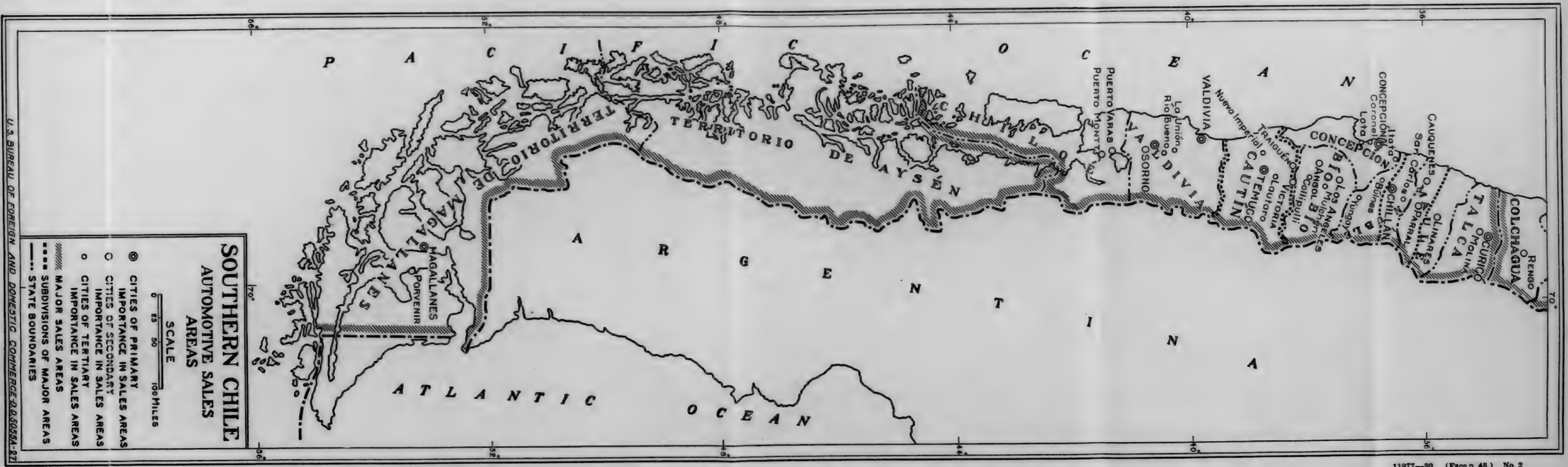
PRECISION℠ RESOLUTION TARGETS

Century
A&P
1303 Geneva Avenue
St. Paul, MN 55119

4.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

3.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890

3.0 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890



SOUTHERN CHILE
AUTOMOTIVE SALES AREAS
SCALE
100 MILES
CITIES OF PRIMARY IMPORTANCE IN SALES AREAS
CITIES OF SECONDARY IMPORTANCE IN SALES AREAS
CITIES OF TERTIARY IMPORTANCE IN SALES AREAS
MAJOR SALES AREAS
SUBDIVISIONS OF MAJOR AREAS
STATE BOUNDARIES
PACIFIC OCEAN
ATLANTIC OCEAN
ARGENTINA
TERRITORIO DE MAGALLANES
TERRITORIO DE AYSÉN
CHILOE
VALDIVIA
CAUTIN
BIO BIO
CONCEPCION
ÑUBLE
TALCA
COLCHAGUA
MAGALLANES
PORVENIR
PUERTO VARAS
PUERTO MONTT
OSORNO
La Unión
Rio Bueno
Nuevo Imperial
TEMUCO
Traiguén
VICTORIA
Los Angeles
Mulchén
Angol
Collipulli
Yungay
Lota
Coronel
Tomé
Bulnes
CHILLAN
San Carlos
PARRAL
LINARES
CAUQUENES
MOLINA
CURICO
RENGO
U.S. BUREAU OF FOREIGN AND DOMESTIC COMMERCE

FIGURE 2

REDUCTION

RATIO

12:1

2.0 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890

1.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890

PM-MGP 13"x18"
METRIC GENERAL PURPOSE TARGET
PHOTOGRAPHIC

150 mm

100 mm

1.0 1.1 1.25 1.4 1.6 1.8 2.0 2.2 2.5 2.8 3.2 3.6 4.0 4.5 5.0

1.0 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890

1.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890

2.0 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

2.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

A5

A4

PRECISION℠ RESOLUTION TARGETS

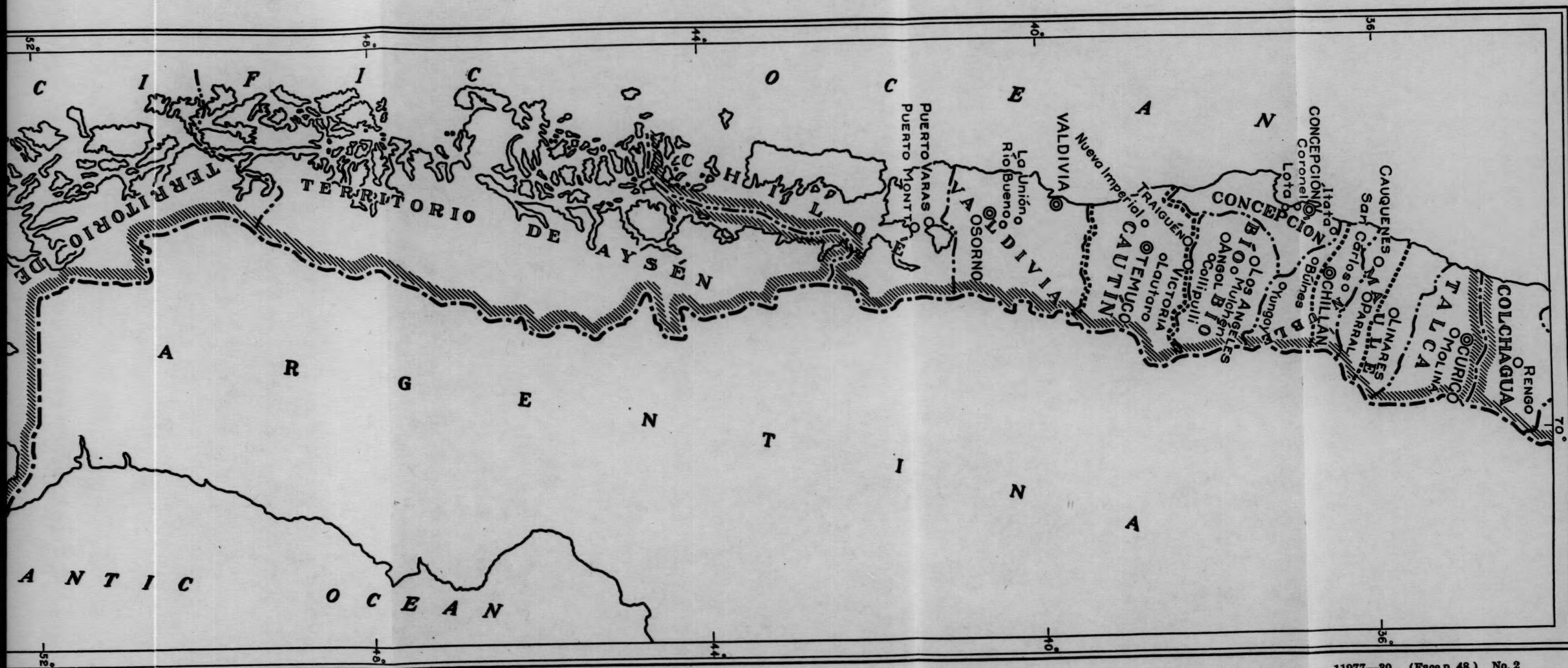
Century
A&P
1303 Geneva Avenue
St. Paul, MN 55119

4.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

3.5 mm ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890

SOUTHERN CHILE
AUTOMOTIVE SALES AREAS
SCALE
0 25 50 100 MILES
CITIES OF PRIMARY IMPORTANCE IN SALES AREAS
CITIES OF SECONDARY IMPORTANCE IN SALES AREAS
CITIES OF TERTIARY IMPORTANCE IN SALES AREAS
MAJOR SALES AREAS
SUBDIVISIONS OF MAJOR AREAS
STATE BOUNDARIES
PACIFIC OCEAN
ATLANTIC OCEAN
ARGENTINA
CHILE
TERRITORIO DE AYSÉN
TERRITORIO DE MAGALLANES
MAGALLANES
PORVENIR
44°
48°
52°
56°
70°
U.S. BUREAU OF FOREIGN AND DOMESTIC COMMERCE-D.D.5055A-27

FIGURE 3



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